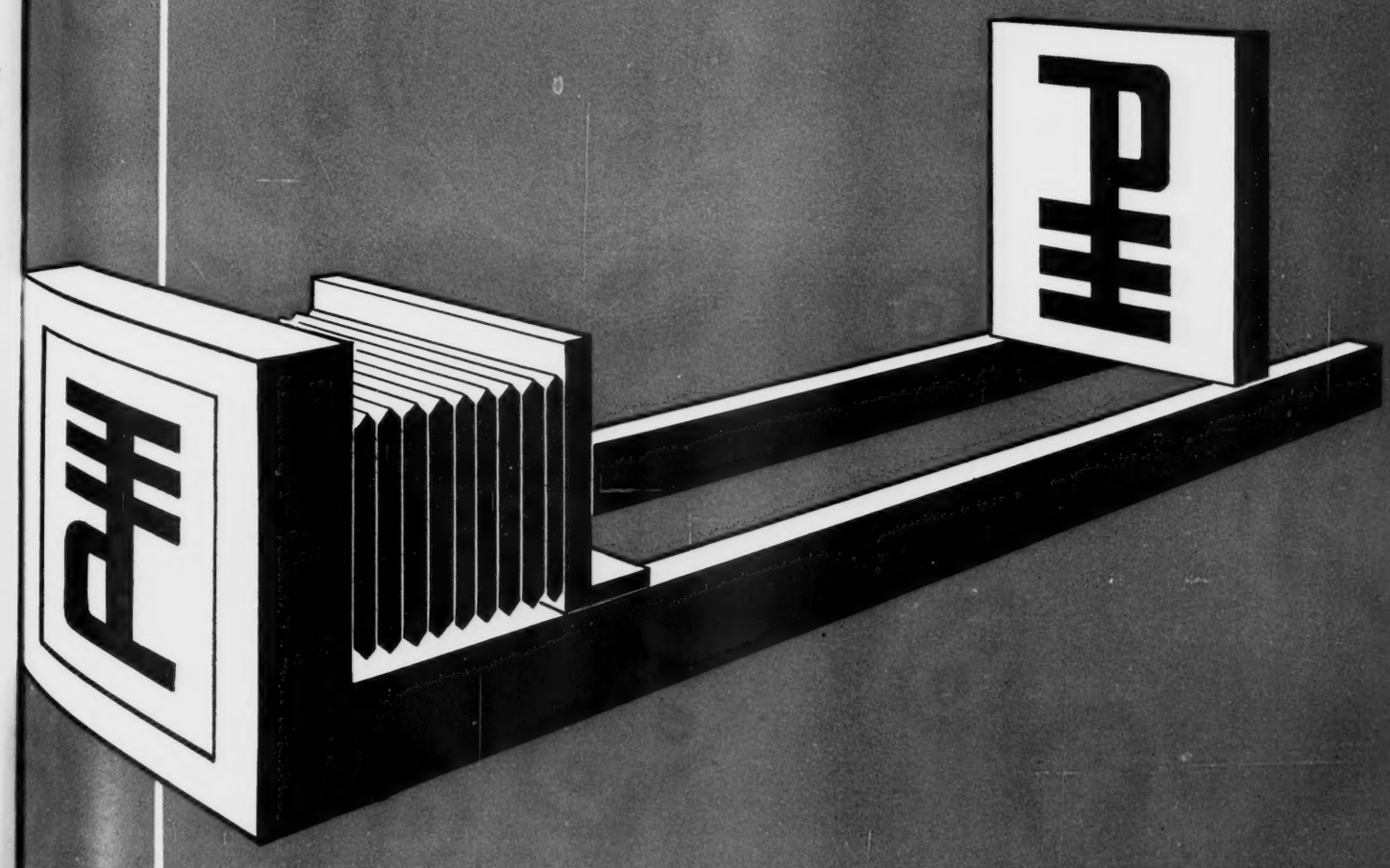
OCTOBER 1950

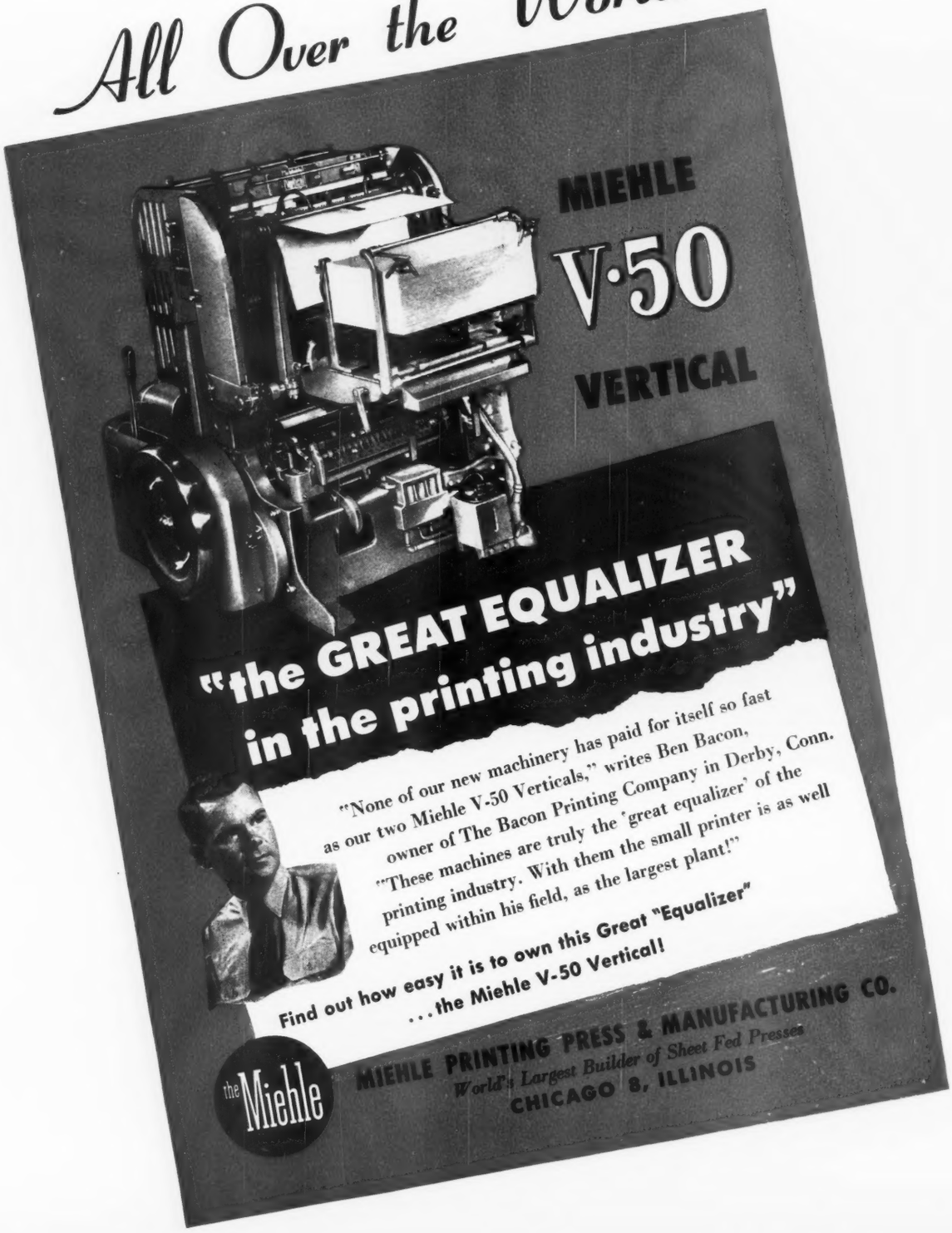
PLEASE ROUTE THIS COPY TO	
Manager	Pressroom F'm'n
Production Mgr.	Bindery F'm'n
Plant Supt.	Mailing F'm'n
Platemaking F'm'n	Maintenance Supt.
Composing F'm'n	Purchasing Agt.
For filing, please return to	

PRINTING EQUIPMENT *Engineer*

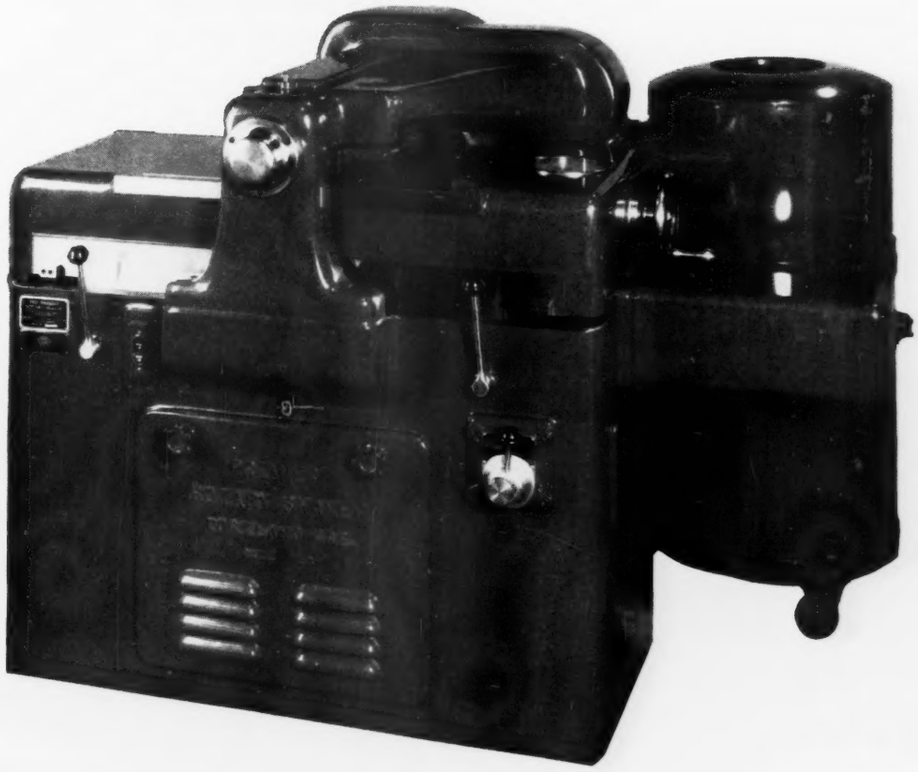


AN INDUSTRY-WIDE TECHNICAL PUBLICATION

More Than 17,000 Verticals Are Making Profits for Printers All Over the World


MIEHLE
V·50
VERTICAL
"the GREAT EQUALIZER in the printing industry"
"None of our new machinery has paid for itself so fast as our two Miehle V-50 Verticals," writes Ben Bacon, owner of The Bacon Printing Company in Derby, Conn. "These machines are truly the 'great equalizer' of the printing industry. With them the small printer is as well equipped within his field, as the largest plant!"
Find out how easy it is to own this Great "Equalizer" ...the Miehle V-50 Vertical!
the Miehle
MIEHLE PRINTING PRESS & MANUFACTURING CO.
World's Largest Builder of Sheet Fed Presses
CHICAGO 8, ILLINOIS

Year after year... it's still Premier!



STA-HI

- When the STA-HI Premier Rotary Shaver was introduced to America's progressive, discerning newspaper and commercial graphic arts plants some 15 years ago, we said the machine was "built to last a lifetime". And time has proved we weren't far from wrong.
- There are now several hundred Premier Rotary Shavers in operation. Not one of these machines has ever been traded in on new equipment or replaced by other machinery. And if we had to make a living selling replacement parts for this superbly designed, precision-performing machine, we'd starve to death. Given normal maintenance attention the Premier just keeps on rolling through the years, shaving stereotypes, electrotypes, zincs, wood or metal base—with consistent micrometer accuracy.
- One of the many completely satisfied Premier owners recently told us: "We like to compare the machine to the highest priced automobile with the finest workmanship. When our men operate the Premier Shaver it does something to them, gives them the same feeling of a man who drives a custom built automobile. It is superb in every detail!"
- Praise like that for a piece of printing production machinery is high praise, indeed! You, too, will be proud to be the owner of a Premier Rotary Shaver. Let us tell you more about it.

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"SUPERIOR NEWSPAPER PRODUCTION MACHINERY"

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They mean a lot when you buy equipment

DESIGN

MANUFACTURE

ABILITY

meaning the ability of the manufacturer to design and build equipment that is *efficient and dependable.*

LAKE ERIE is one of the world's largest manufacturers of . . . and a recognized leader in the development of . . . hydraulic machinery.

LAKE ERIE has had over fifteen continuous years of specialized experience in the development of hydraulic plate-making equipment.

SALES

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

ONE ORGANIZATION

SERVICE

RESPONSIBILITY

meaning the manufacturer's responsibility for his equipment *after it is sold.*

LAKE ERIE equipment is designed, manufactured and serviced by one organization . . . whether it is sold direct or through an authorized agent. *There is no division of responsibility* . . . and never any question about it.

The first hydraulic plate-making equipment ever made by Lake Erie is still operating . . . and Lake Erie is *still prepared to service it after fifteen years.*

You can depend on the Ability and Responsibility of the Lake Erie Organization

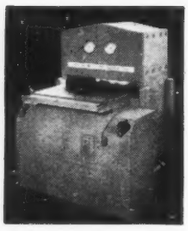
LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

LAKE ERIE ®

LAKE ERIE ENGINEERING CORP.
504 Woodward Avenue, Buffalo 17, New York
Offices in Principal Cities and Foreign Countries

★

● Leading manufacturer of hydraulic presses—all sizes and types—stereotype molding . . . plastics molding . . . laminating . . . die sinking . . . metal working . . . forging . . . metal extrusion . . . waste wood and plywood . . . rubber vulcanizing . . . special purpose.



ACRAPLATE for Rubber and Plastic Printing Plates

Over 380 Acraplates are now in service . . . far more than all other makes of equipment combined. And there are far more models of Acraplate to select from when you buy . . . to assure that you get the most efficient machine possible for your specific purpose.

● **WRITE** for descriptive literature or recommendations. No obligation.

Heavier, Smarter, Better

NEW—inker with adjustable long stroke vibration.

NEW—heavier frames, cylinders and bed and even more rigid impression.

NEW—smoother, faster operation.

NEW—higher production.

NEW—conveniences for the operator.

MILLER 27 x 41 SY SINGLE COLOR

STANDARD EQUIPMENT—Includes automatic oiling with mercury shut-off switch; tachometer; totalizer; two complete sets roller stocks (one set cast); two delivery boards with casters; counter; set of wrenches; screw driver; oil can; gas burner; variable speed press motor, constant speed pump motor, and push-button control ready for wiring; two reloading feed boards.

ROLLER CORES	No. Required	Diam. of Composition
Form	3	2½"
Distributor		
(Short)	3	2½"
(Long)	1	2½"
Fountain Ductor	1	2½"
Total	8	

SPECIFICATIONS:	
Bed Size	32⅜" x 41¾"
Maximum sheet	28" x 41"
Minimum sheet	11" x 17"
*Maximum size form on bed	25" x 41"
*Maximum size form in chase	25" x 38"
Stock handled	.0025 to .020 (Some stocks up to .036)
Range of operating speed	2100 to 4200
Maximum feeder stock capacity	46"
Height to top of feeder pile	4' 9½"
Maximum delivery stock capacity	39"
Height to top of delivery pile	3' 6"
Horse power required, press	7½
Horse power required, pump	2

*27½" x 41" maximum form on bed, 27½" x 38" maximum form in chase with cylinder advanced and one form roller lifted.

WEIGHTS: (Approx.)	
Net weight, including motors	18,300 lbs.
Shipping weight—Assembled	21,200 lbs.
—Dismantled	22,725 lbs.

MILLER 27 x 41 TY "TWO-COLOR"

STANDARD EQUIPMENT—Includes automatic oiling with mercury shut-off switch; tachometer; totalizer; two complete sets roller stocks (one set cast); two delivery boards with casters; counter; set of wrenches; screw driver; oil can; gas burner; variable speed press motor, constant speed pump motor, and push-button control ready for wiring; two reloading feed boards.

ROLLER CORES	No. Required	Diam. of Composition
Form	6	2½"
Distributor		
(Short)	6	2½"
(Long)	2	2½"
Fountain Ductor	2	2½"
Total	16	2½"

SPECIFICATIONS:	
Bed size	29¼" x 41½"
Maximum sheet	28" x 41"
Minimum sheet	11" x 17"
Maximum size form on bed	25" x 41" each
Maximum size form in chase	25" x 38" each
Stock handled	.0025 to .015 (Some stocks up to .026)
Range of operating speed	2000 to 3750 (7500 imps.)
Maximum feeder stock capacity	46"
Height to top of feeder pile	5' 0½"
Maximum delivery stock capacity	42"
Height to top of delivery pile	3' 9"
Horse power required, press	10
Horse power required, pump	2

WEIGHTS: (Approx.)	
Net weight, including motors	26,100 lbs.
Shipping weight—Assembled	29,900 lbs.
—Dismantled	32,000 lbs.

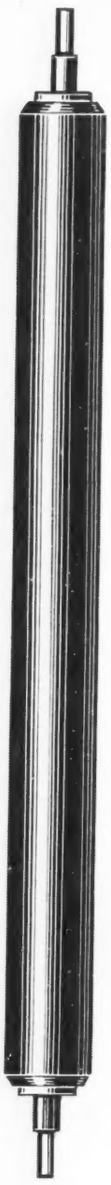
Write for Literature

MILLER PRINTING MACHINERY CO.

PITTSBURGH, PA.

OVER ONE HUNDRED YEARS OF ROLLER MAKING

SAM'L BINGHAM'S SON MFG. CO.



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WE ARE NOW MAKING COMPOSITION ROLLERS

for

WINTER USE

SHIP YOUR OLD ROLLERS TO

THE FACTORY MOST CONVENIENT TO YOU

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ATLANTA 3
CHICAGO 5
CLEVELAND 14
DALLAS 1
DES MOINES 2
DETROIT 10
HOUSTON 6
INDIANAPOLIS 2

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MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

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MINNEAPOLIS 15
NASHVILLE 3
OKLAHOMA CITY 6
PITTSBURGH 3
ST. LOUIS 2
SPRINGFIELD, O.

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PRINTING EQUIPMENT *Engineer*

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

OCTOBER 1950

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A New Reference Volume For Mechanical and Production Executives

Commercial and newspaper printing plant executives will find constant use for this encyclopediac volume.

Many new features included on photoengraving, typography, electrotypes, printing processes, paper, binding, mailing and photography.

Size, 8½ in. by 11¼ in.; 918 pages include 4000 subjects listed in the index, 659 editorial illustrations, and other features.

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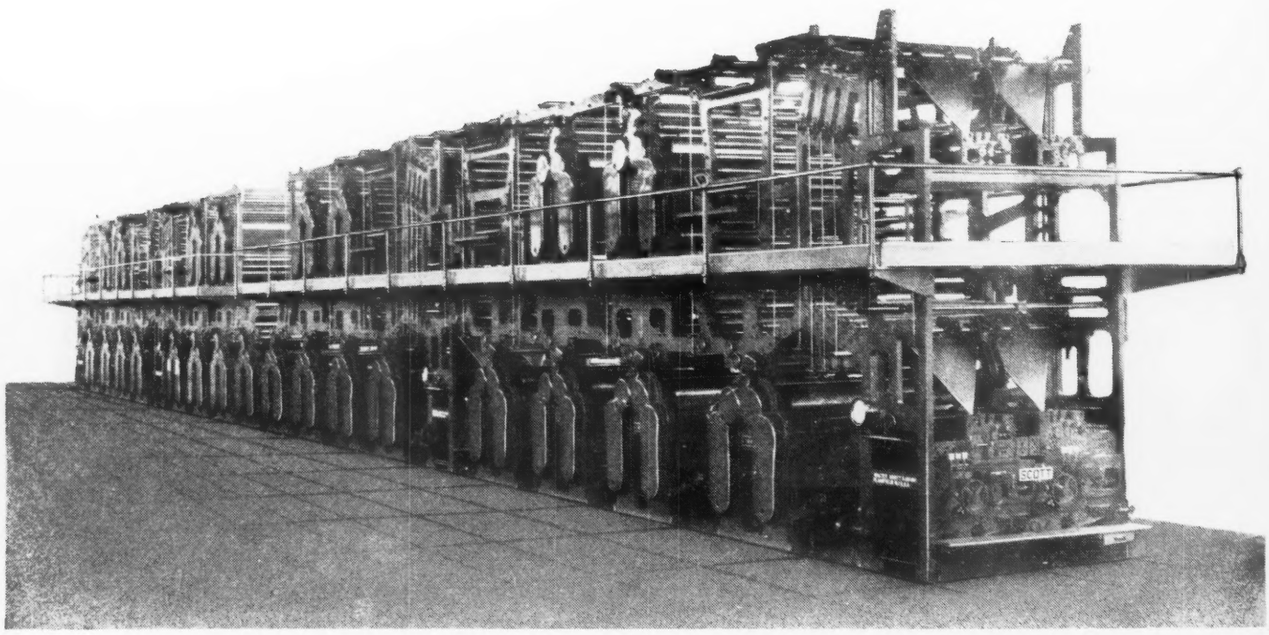
Scott Presses Are Technically Ahead

...Because They Are Planned Ahead!

MANY NEW FEATURES, some more readily apparent than others are constantly being added to SCOTT PRESSES—an already advanced design and greatly refined product.

NONE of these features are offered to customers or embodied in the machines until they have been thoroughly tried out, so that there is no experimenting in your pressroom.



The above illustration shows a press in our Factory developed for The Washington Post consisting of 16 Black Units and 8 superimposed Color Units.

This machine will be in operation around October first.

BUY WITH CONFIDENCE — *BUY A SCOTT*

WALTER SCOTT & CO., INC.

PLAINFIELD, N. J.

NO ARC LAMPS

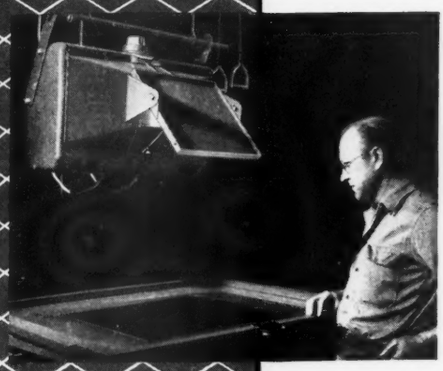
Have Ever Won Such Wide Acceptance

9 out of 10 motor-driven arc lamps used by the industry are

STRONG GRAFARC

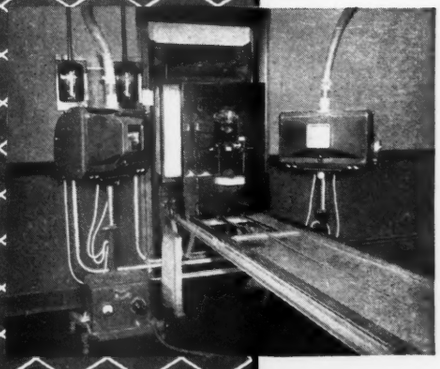
FULLY AUTOMATIC • HIGH INTENSITY

ARC LAMPS



IN YOUR PLATE MAKING DEPARTMENT

Cut exposure time in half. Assure sharper prints. Freedom from dot undercutting is made possible by the single arc combined with the cross-over of the reflected light rays. Models for vertical and horizontal printing frames.



IN YOUR CAMERA GALLERY

Provide uniform illumination on work of any size. Extreme steadiness of light volume—constant color temperatures. Eliminate the illumination variable in the accurate control of densities. Have the power to punch through dense Kodachromes.

ON STEP AND REPEAT MACHINES

With precise control of intensity, accurate repeats become routine.

★ ★ ★

Models for all photo-mechanical reproduction processes. Adapters to fit most cameras and photo-composing machines. Because of the low current requirement, the present line supply wiring to your equipment is usually adequate.

★ OVERSIZE CARRIAGE SLIDE BEARINGS. Large ball bearing motor. Bakelite gears on hardened steel worms. Heavy gauge sheet metal and aluminum cast housing.

★ MODERN SILVERED GLASS REFLECTOR. Higher reflectivity compared to a metal reflector results in approximately twice the light per arc watt.

★ ARC STEADINESS. The result of using high intensity carbons in a draft-shielded horizontal trim.

★ NO VACUUM TUBES OR RELAYS. The current and voltage of the arc directly control the feed motor speed.

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☐ Please send free literature and prices on Grafarc Lamps.

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FIRM.....

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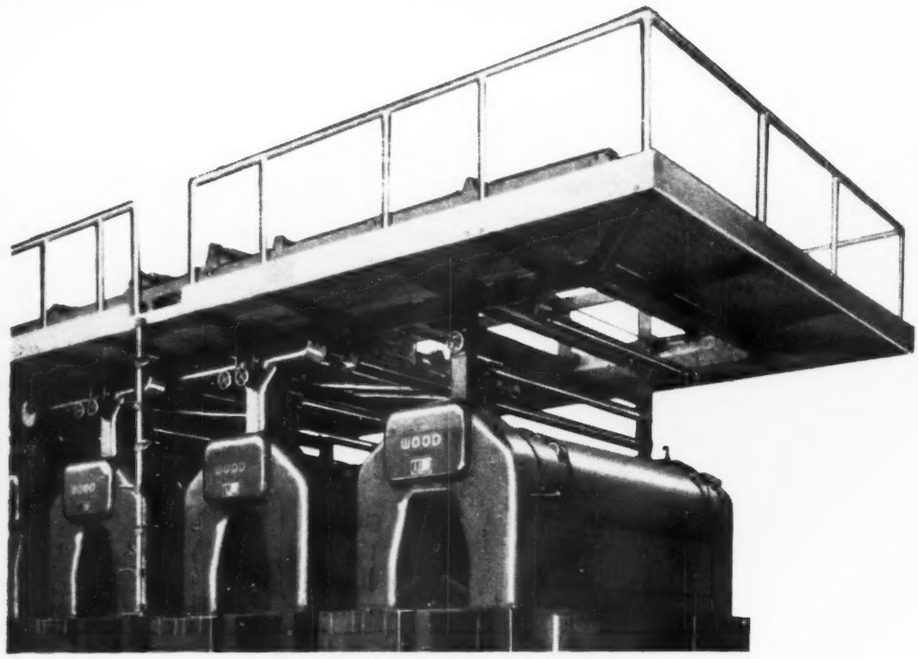
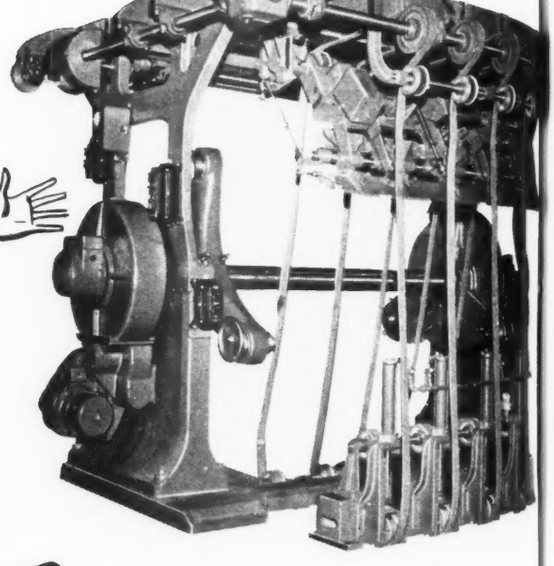
CITY.....STATE.....

MORE PRESSROOM EQUIPME



This WOOD 4-unit black press is equipped with a doub folder. WOOD presses are desig for high speed production wi a minimum of maintenance.

REELS — PASTERS — TENSIONS to be installed under each of the Newsday units will replenish webs at high speeds. Proper web tension will be automatically maintained by Pneumatic Tensions to prevent web breaks.



IF IT'S **Wood** IT'S GOOD

Newsday...

and it's Wood Equipment!

A new WOOD 4-unit press with Tension-plate Lockup—complete with WOOD Reels, Pasters and Pneumatic Tensions — will fill the steadily mounting production demands of the Newsday plant at Garden City, Long Island.

Like many other far-sighted publications, Newsday is modernizing its plant with fast WOOD press and stereotype equipment to meet "upped" production schedules.

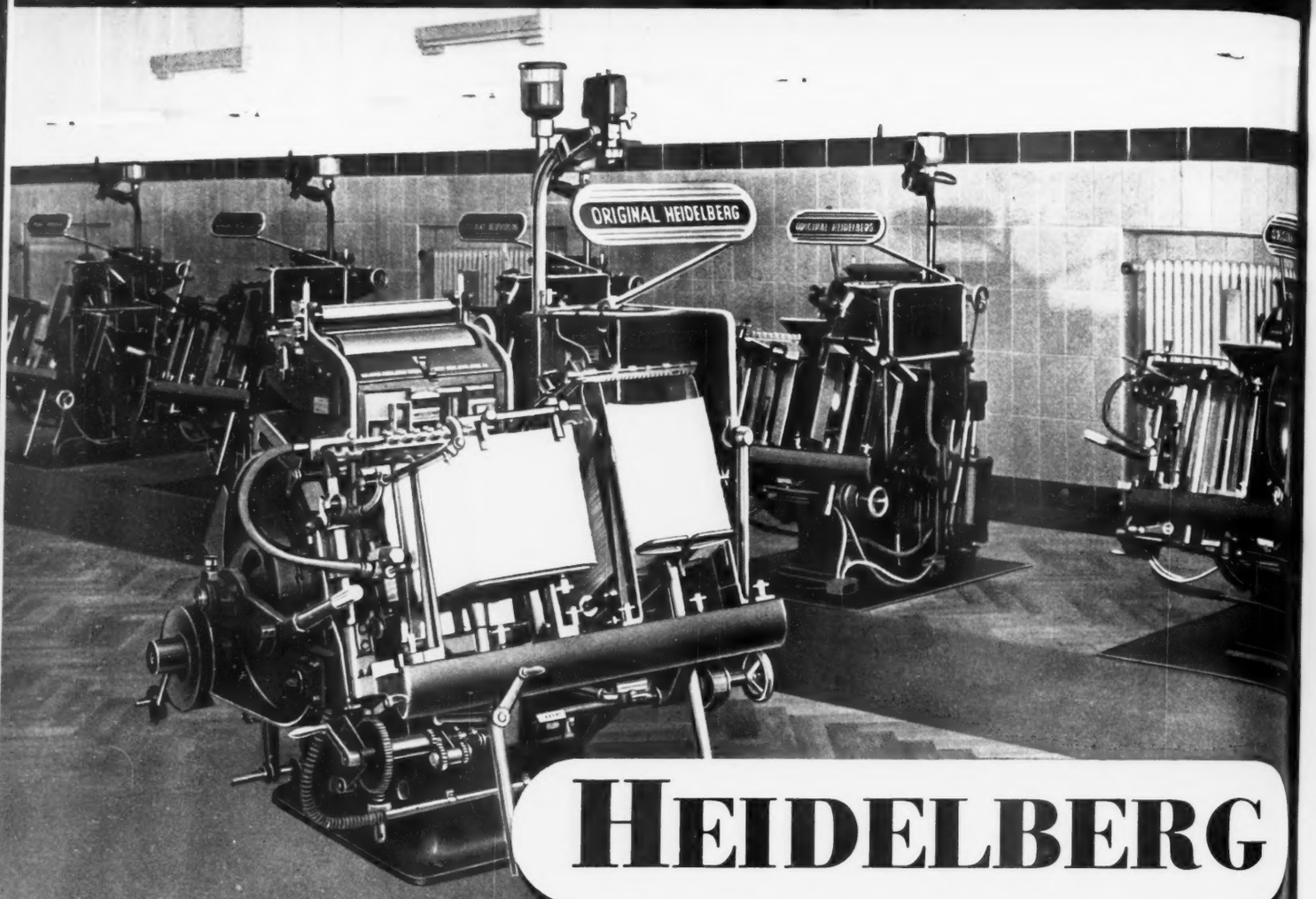
Let WOOD engineers show you where faster production with a better looking newspaper is not only possible . . . but possible at a lower unit cost.

WRITE OR CALL THE WOOD OFFICES FOR FURTHER INFORMATION

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

Here's the Most Wanted Press in the World



HEIDELBERG

Here's the most wanted press in the world . . . it's the world's fastest automatic platen, with the highest production per hour, and the fastest running speed of any automatic platen, anywhere.

Printers the world over are clamoring for this press, and no wonder it is the fastest selling automatic printing press, bar none . . . it is the press to boost the printer's profits.

The Heidelberg fills the printer's bill and his billfold . . . it is the all-purpose automatic platen . . . built for the single purpose of earning more money for the printer . . . 38,000 so far!

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Coast-to-Coast Service

The World's Fastest Automatic Platen

75th *Anniversary*

1875-1950
Three quarters of a century's service

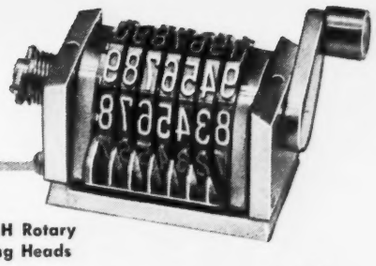
FORCE

makes a machine to handle each and every NUMBERING JOB!

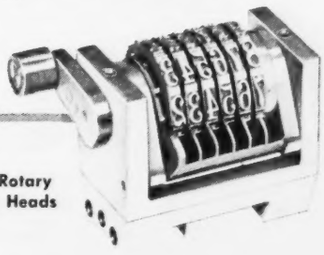
There's a Force Rotary Numbering Head or Typographic Numbering Machine for every press requirement —for every numbering job in the shop. Many involved and complicated jobs have been made simple. If the machine you need isn't standard, FORCE engineers will help you design the most efficient equipment to meet your requirements. FORCE reputation for good and faithful service dates back three-quarters of a century.

Write for Catalog J, showing complete line of Numbering Machines.

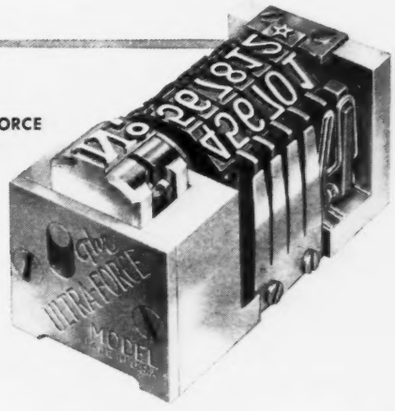
FORCE also manufactures a full line of precision made Hand numbering and dating machines.



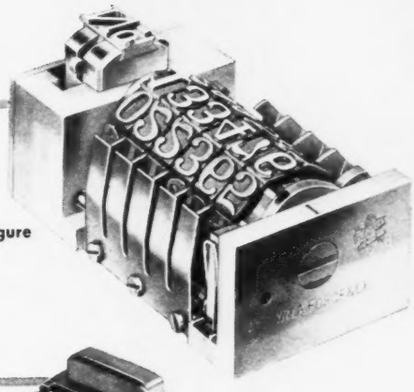
FORCE MH Rotary Numbering Heads



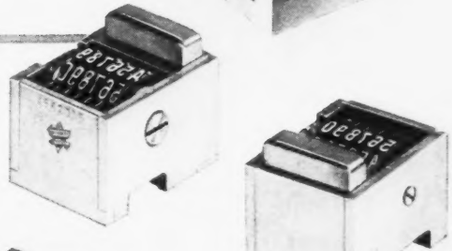
FORCE DU Rotary Numbering Heads



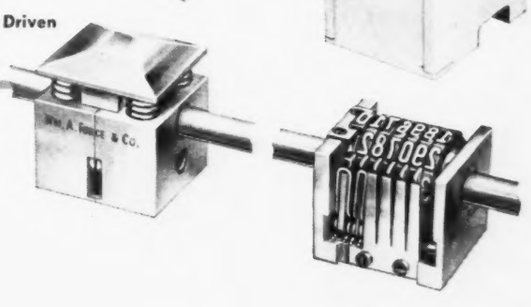
The Ultra-FORCE Typograph



FORCE large Figure Typograph



FORCE Top and Bottom Plunger Typographs



FORCE Center Driven Typograph

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INCORPORATED
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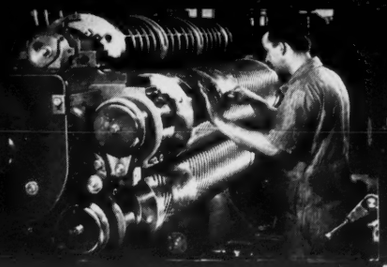
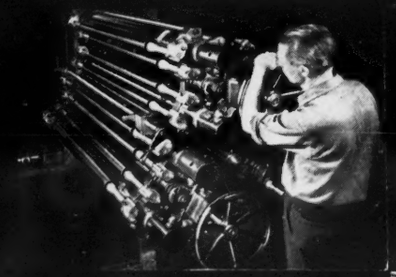
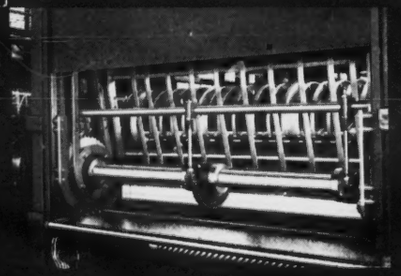
COTTRELL







C. B. Cottrell & Sons Company

Rotary

EVERYTHING'S DONE FROM THE FLOOR!

One of the outstanding presses shown at the recent Graphic Arts exhibit was the new Cottrell Two-Color Sheet-Fed Rotary Letterpress which was in operation throughout the show. This press, made in sizes 29″ x 45″ and up, is designed for the medium-size commercial printer and for profitable production of medium-size runs.

As will be noted in the illustrations to the left, everything connected with the operation of this press is done from the floor, which greatly speeds up makeready, register and starting time.

All the details of this press, including sizes and specifications, are completely covered in the new folder which will be sent upon request. Please write for it.

the hit of the show!

new Cottrell two-color sheet fed rotary

chemco

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CHEMICALS
FILMS

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DEVELOPING EQUIPMENT
PRINTING EQUIPMENT
ETCHING EQUIPMENT

STRIPPING EQUIPMENT
SENSITIZING EQUIPMENT
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CARBON TISSUE

PHOTO MECHANICAL EQUIPMENT AND SUPPLIES

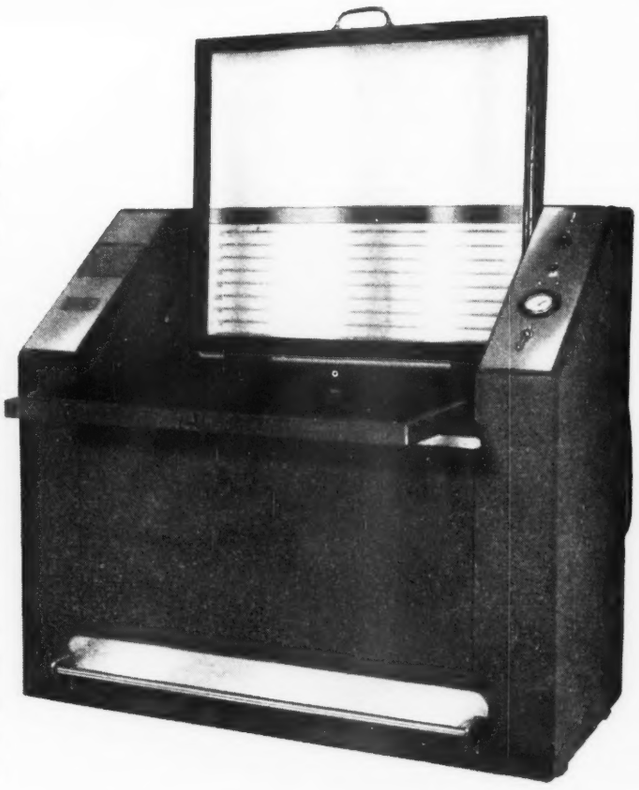
CHEMCO COLD GRID PRINTER

No glare . . . no smoke . . . no fumes, and no excessive heat! And in just about *half* the space required for the ordinary frame and arc setup, the Chemco Cold Grid Printer provides printing efficiency and convenience unequalled by anything on the market.

The unit utilizes a vacuum printing frame and a high actinic light source to accommodate plates up to 24" x 30". Average printing time is four minutes under the Chemco specified illuminant, diffused to eliminate the imperfections of scratches, dirt and flaws on the printing frame glass.

The Chemco Cold Grid Printer effects almost unbelievable economies in power, maintenance and space. For example, it draws only 1500 Watts as compared to 7500 Watts needed for the average printing arc . . . and operates from any ordinary 110 Volt line!

You'll want to know a lot more about this money saving Chemco machine . . . send for complete information now.



CHEMCO COLD GRID PRINTER MODEL 3000

Simple Control Panel Operates Vacuum Source, Lights, Timer and Instruction Plates. Includes Pilot Light, On-Off Switch and Vacuum Indicator.

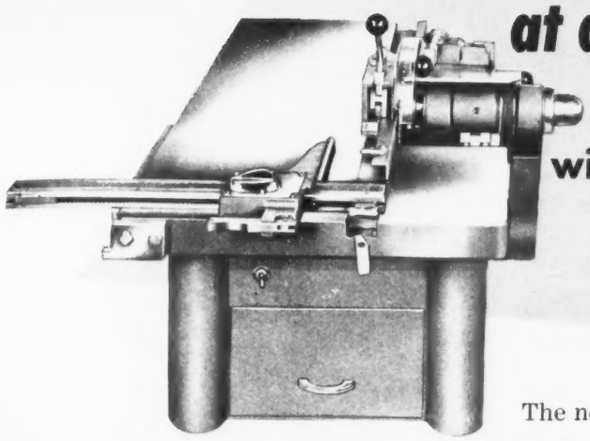
chemco PHOTOPRODUCTS COMPANY, INC.
FACTORY AND GENERAL OFFICES GLEN COVE, N. Y.
BRANCHES: New York, Chicago, Detroit, New Orleans, Boston, Atlanta, Dallas

CHEMCO PHOTOPRODUCTS CO., INC. PE-10
GLEN COVE, N. Y.
Gentlemen: I am interested in learning more about your following products:

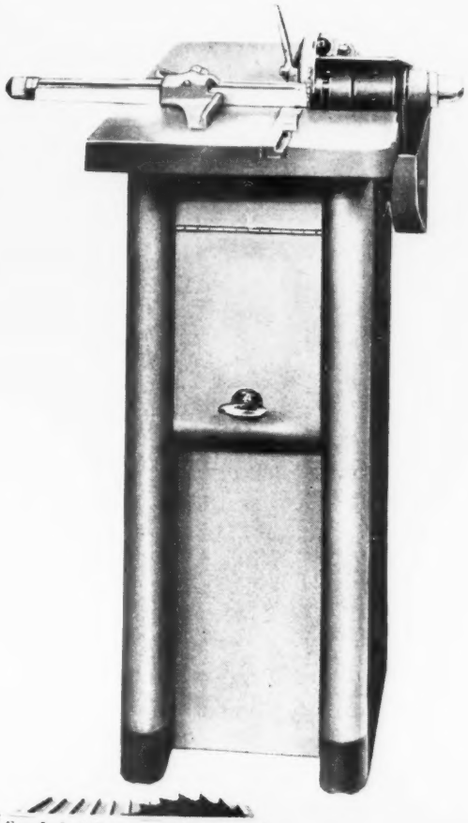
Name
Firm Name
Address
City State

Enjoy MORRISON

Saw Trimmer Benefits at a *NEW LOW COST...*



with Morrison New "45 Special" BENCH or CABINET Models



The new "45 Special" now brings Morrison Saw Trimmer production savings within the reach of *every* composing room. Designed for the smaller plant or for auxiliary use in larger composing rooms, the "45 Special" offers most of the famous Morrison features and advantages proven so valuable in larger models. The "Behind the Gauge" work clamp is standard on both the bench and cabinet model, although the conventional clamping is available optionally if desired.

Standard Equipment Includes:

- 75 Pica Gauge and workholder
- Standard 6" saw blade assembly with head and trimmers
- Extra standard saw blade with 64 swaged teeth
- Clear Plastic Saw Guard
- Necessary Tools
- Motor with pulley; 1/3 h.p.; for 110 or 220 volts A.C.
- Mitering Equipment available as extra equipment

Find out today how the "45 Special" Saw Trimmer will save time and money for you! Write for complete details. We'll be glad to tell you where you may see one in operation.

Symbol of Operating Economy

MC
THE MORRISON COMPANY
MILWAUKEE WIS.

THE *Morrison* COMPANY

125 WEST MELVINA STREET • MILWAUKEE 12, WIS.

ANNOUNCING

The New Cleveland "Model KK" with Continuous Suction Feeder

No cigars are being passed to celebrate, but we believe this advent will be welcomed by printers and binders everywhere.

This new addition to the Cleveland family is the largest all-buckle type right angle folder ever built. It is designed to meet the Cleveland tradition of rugged construction, speedy, efficient operation and a lifetime of good service that will pay off its cost many times over.

With "Model KK' many jobs that because of their sheet sizes had to be handled on blade type folders, can now be folded the fast, economical Cleveland way.

Complete information about this new Cleveland will be furnished promptly upon request.

"MODEL KK" CLEVELAND

Folds sheets up to 44 x 64" in parallel and up to 44 x 58" in right angle; minimum sheet size 12 x 16". Makes one, two, three and four parallel and one, two, three and four right angle folds, plus a combination of parallel and right angle folds.

Standard fold plate combination 4 - 4 - 2 - 1

Dexter • Christensen • Mc Cain

Machines for Printers and Binders

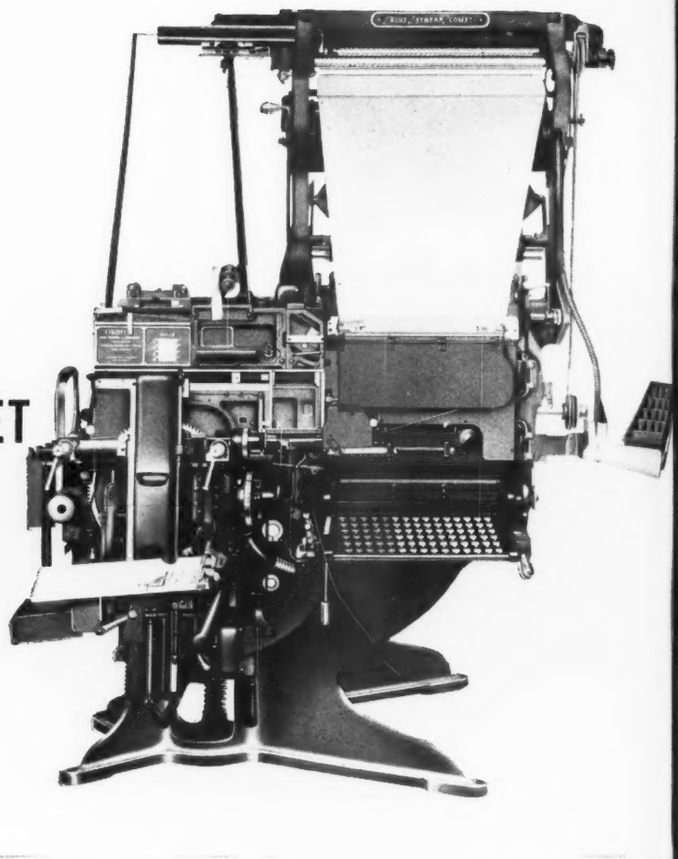
CHICAGO . . . SEPTEMBER 23, 1950 . . .

PRINTERS AND PUBLISHERS HERE AGREE . . .

NEW COMPOSING-ROOM EQUIPMENT AT BOOTH 282—

NATIONAL GRAPHIC ARTS EXPOSITION—WAS THE HIT OF THE SHOW . . .

A HIT OF THE SHOW!



The new Blue Streak COMET
fast, dual-purpose Linotype

Engineered for action, the Blue Streak Comet is the fastest Linotype ever built. Assembling, casting, distributing—all functions of the two-magazine Comet have been simplified. Many parts have been standardized, others modified, while still others have been eliminated entirely. The Comet provides easier maintenance—easier operation. Completely new in its engineering concept, the Comet can be mechanically operated at casting speeds up to 12 column-width lines per minute.

Manually or Teletypesetter Operated—*When manually operated,* the Comet thrives on last-minute rush jobs or steady hour-after-hour line production. New, easy-to-operate controls cut the time required for shifting magazines, making vise-jaw adjustments and other machine settings. The Comet may be equipped for manual operation at any speed between 6⅓ and 12 lines per minute.

When Teletypesetter operated, the Comet races through 12 lines of single-column text per minute. If operated by a Teletypesetter unit and equipped with a special Linotype self-quadder, the Comet quads right, left or centers in response to tape perforations. Linotype and the Teletypesetter Corporation have worked together in developing a new high-speed Teletypesetter for use on the Comet.

Check the time-saving, profit-building features of the Blue Streak Comet. Then, ask your Linotype representative for further details. You'll agree—the Comet is the practical answer to high maintenance costs and inflexible production deadlines.

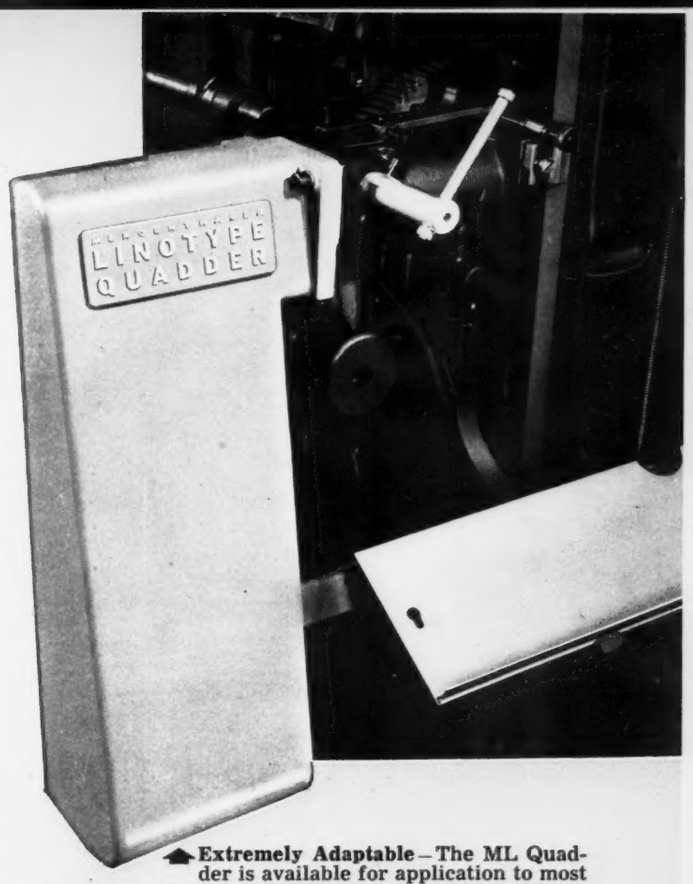
Exclusive Comet Features
For Lower Maintenance and Operating Costs

- **Standard Frame Motor**—Easily replaced or repaired at any electrical supply store, this motor is simply mounted on a built-in motor frame.
- **Aluminum Distributor Screws**—Light but strong, these new screws respond quicker to interference—minimize possibility of matrix damage.
- **New Heating Units and Controls**—Heaters are cast in solid aluminum which is then machined for even conduction of heat to crucible, throat and mouthpiece. New controls simplify temperature adjustment.
- **Swing-Out Front**—The entire front of the Comet—from the bottom of the magazine to the keyboard—swings out for instant accessibility to keyboard rods. Keyboard also swings out for easier maintenance.
- **Removable Keyboard Rod Frame**—For lubrication or maintenance of adjacent parts, loosening two screws permits removal of keyboard rod frame.
- **New Distributor Clutch**—This simple, positive mechanism safeguards matrices and machine during distribution. The prototype of this efficient safety has been field-tested for years with excellent results.
- **Handwheel Vise Jaw Adjustment**—Adjusted in a matter of seconds, this new handwheel and a micrometer knob set the left jaw for any measure in ems or points.
- **Simplified Assembler**—Smoother assembling with less maintenance results from the new Comet assembler. Swings out with the rest of the Comet's front.
- **New Magazine Shift and Counterbalance**—Switch from one magazine to the other in less time than ever. No motors—no maintenance problems.

Plus—All the other features found on all new Blue Streak Linotypes!

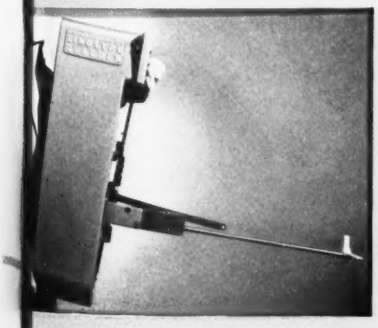
A HIT OF THE SHOW!

The Completely New
MLCo. QUADDER
For Your Present Line-Composing Machines

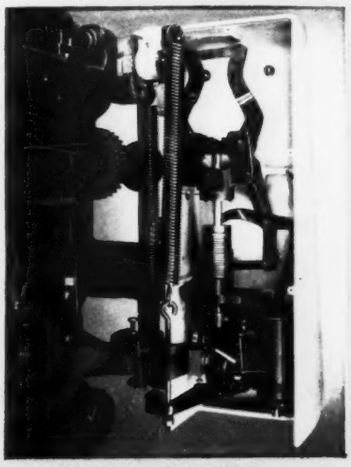


Extremely Adaptable—The ML Quadder is available for application to most 30-em composing machines with or without the Mohr Lino-Saw, six-mold disk or Thermo-Blo mold cooler. When installed on Linotypes manufactured within the last seven years (Serial No. 55835 and up), no additional equipment is necessary. For some machines not in the above category, modifications might have to be made.

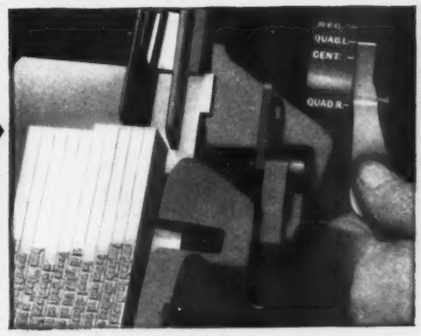
Simple, compact and reasonably priced, the new ML Quadder quads right, left or centers—but does not interfere with regular Linotype operation. Its adaptability to practically all line-composing machines now in use enables you to gain new savings—new profits—from your composing-room equipment.



Simple and Sturdy—Weighing less than 35 pounds, the new ML Quadder is installed outside of the casting area. The modern cast-aluminum housing protects the mechanism from dust and dirt. No sharp levers protrude from the casting—the whole unit fits snugly on the vise frame.



Easy to Maintain—All basic adjustments on the ML Quadder are factory-set—no need for constant checking. Parts are engineered to compensate for eventual wear. Quadder may be cleaned and lubricated by simply removing back cover—without opening or dropping vise. All parts on the composing machine remain as accessible as they were before quadder installation.



Easy to Operate—The quadder control is at the operator's fingertips. The selector handle is conveniently located between galley and keyboard. A flick of the lever quads lines right, left, center or makes the quadder inoperative. A new left-hand vise jaw adjusting mechanism on the right-hand side of the vise frame adjusts the jaw for casting any length line.

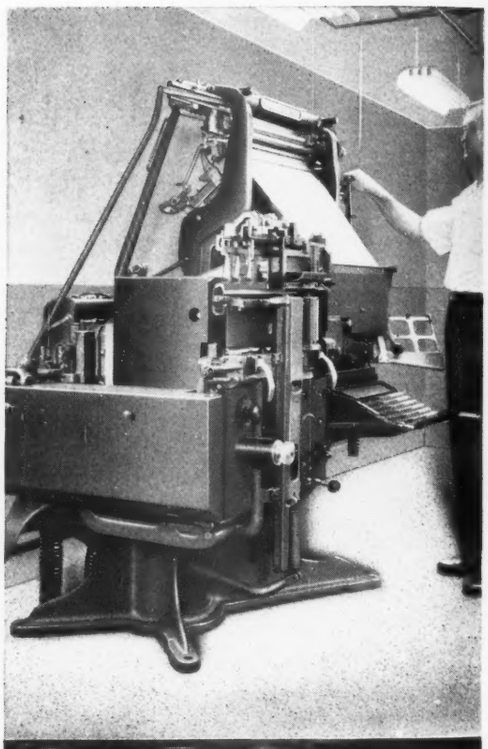
Extra Safety—A new left-hand vise jaw with an inbuilt safety button is standard on the ML Quadder. The button must be depressed by a tight line of matrices before the pot pump can descend into the metal pot. Pressing the button completes an electric circuit and automatically permits the slug to be cast.

How Much Will an MLCo. Quadder Save You?

Savings as high as 50 and 60% have been effected in many shops after self-quadders were made available. Ask your Linotype representative to analyze the composition set in your shop and estimate the savings you could realize with an ML Quadder. For higher composing-room efficiency—and profits to match—write or telephone him today.

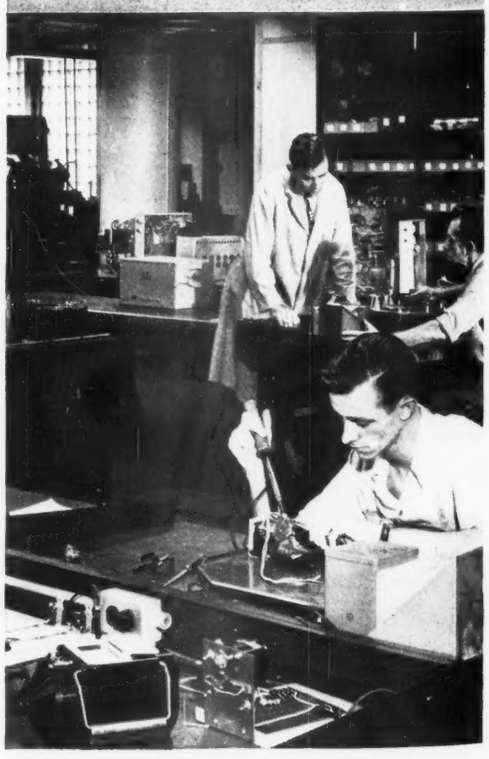
A HIT OF THE SHOW!

The First Showing of **The LINOFILM** –a Linotype photo-composing machine



Operating on a modified Linotype principle, the LINOFILM is capable of producing eight lines of filmed copy per minute. The machine accommodates two 90-channel magazines and uses special two-letter matrices much like the conventional Linotype matrix. After a line of matrices has been assembled, the LINOFILM automatically justifies and photographs it as a complete unit. Type sizes from 6 to 36 points may be obtained photographically from one font of matrices. An example of the accomplishments by Linotype Research in the photo-composing field, the LINOFILM is not offered for sale. Intensive research by Linotype is your assurance that when the most practical and economical method of photo-composition has been found, it will bear the Linotype trade-mark.

Linotype research at work



Using the finest testing and experimental equipment in modern laboratories, Linotype Research continues to provide the printing industry with new, money-saving composing-room equipment. Sound engineering and tireless testing assures you of superior products whenever you specify Linotype machines or genuine Linotype replacement parts.

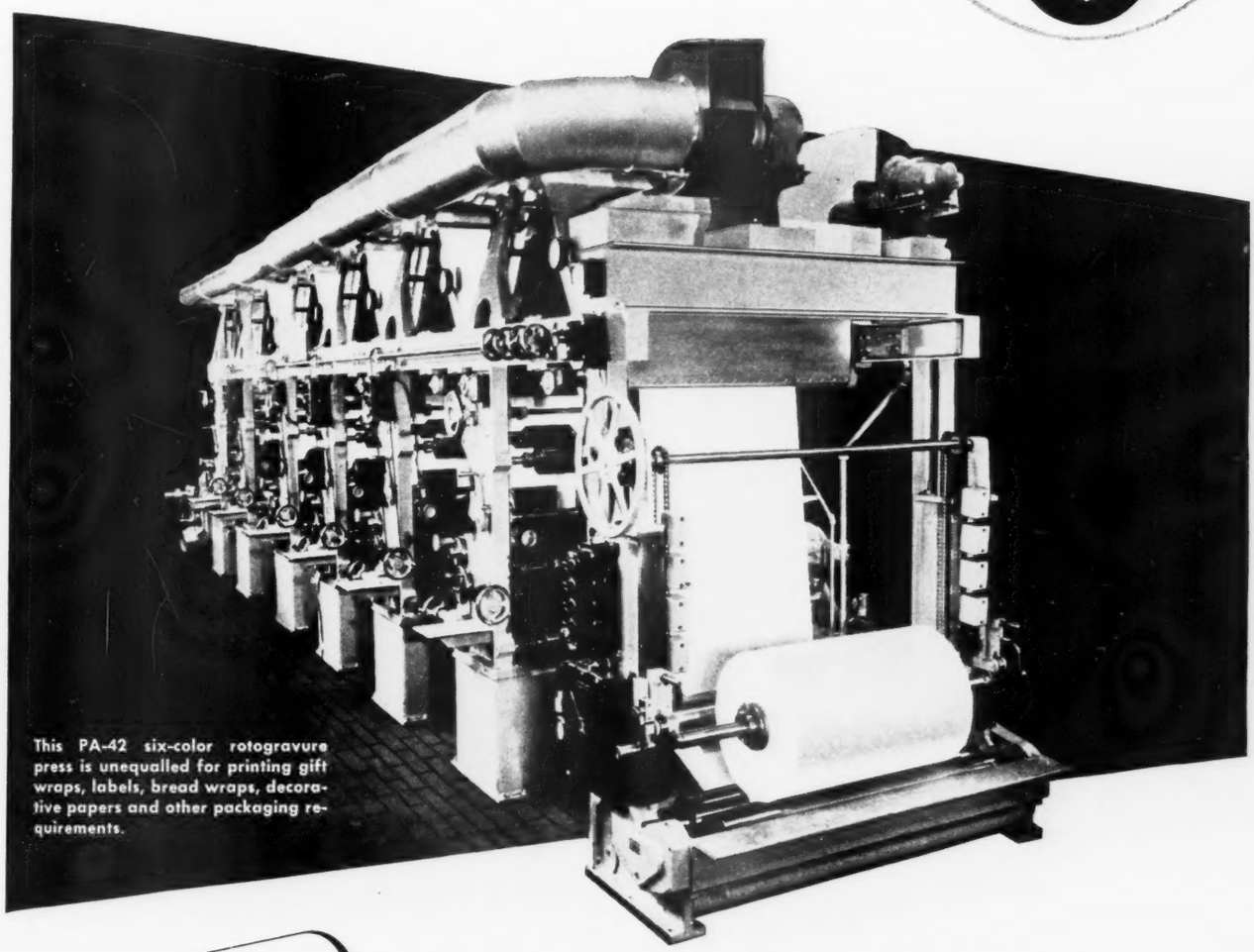
• LINOTYPE •

Mergenthaler Linotype Company
29 Ryerson Street
Brooklyn 5, New York

LEADERSHIP THROUGH RESEARCH

Linotype Corona with Bold Face No. 2; Gothics No. 18 and 20

"Moving up" in the battle for the eye...



This PA-42 six-color rotogravure press is unequalled for printing gift wraps, labels, bread wraps, decorative papers and other packaging requirements.

ATF KLINGROSE

The most complete line in the Rotogravure Press Field

ATF-Klingrose gives you not only the greater eye appeal of rotogravure printing but the choice of press exactly suited to your requirements. You can choose either the regular PA*, or HD* type in web widths from 26" to 72". Built on the unit basis they print any desired number of colors on one or both sides of the web. The printed web can be delivered in cut sheets, folded signatures, or rewound in rolls for further processing. Press speeds are available up to 1,000 F.P.M.

ATF-Klingrose Rotogravure Presses are supreme for printing gift wraps, decorative papers, bread and box wraps, drinking cups, frozen food packages, labels, direct advertising, catalogs and package inserts.

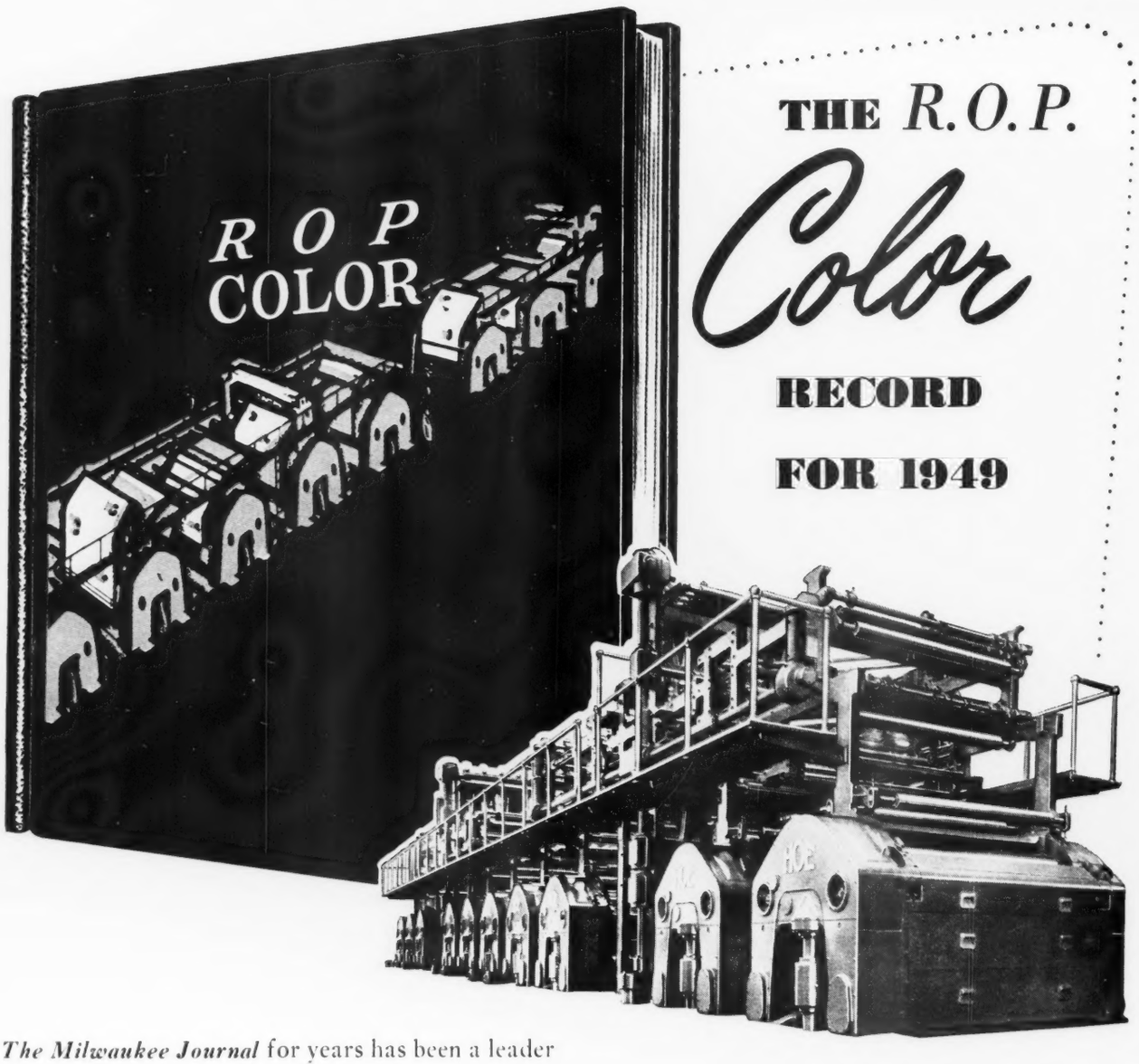
ATF-Klingrose Rotogravure Presses print on webs of cellophane, foil, glassine, tissue, box board, kraft, fancy papers and other materials.

**PA means Pendulum Action impression. HD means Heavy Duty two-roller impression.*

Write for brochure and information on the full line of ATF-Klingrose Rotogravure Presses.

AMERICAN TYPE FOUNDERS

KLINGROSE GRAVURE DIVISION • 150 Twentieth Street, Brooklyn 32, N. Y.



THE *R. O. P.* *Color* RECORD FOR 1949

The Milwaukee Journal for years has been a leader in developing the use of R. O. P. color in newspaper advertising. Second in the country in total advertising linage in 1949, it led in R. O. P. color linage with a total of over 930,000 agate lines.

Because of the great interest shown by newspapers throughout the country The Journal has brought out an informative book, ***"Production of R. O. P. Color in The Milwaukee Journal"*** describing with many color illustrations exceptional possibilities for effective use of color in editorial and advertising content.

Records given in this volume show that twenty-five leading newspapers, last year, had a grand total of over ten million agate lines of R. O. P. color advertising. 5,230,000 of these lines were produced on Hoe Presses, over twice as much as was printed on presses of any other one make among these twenty-five papers.

The many newspapers that are installing HOE COLOR-CONVERTIBLE NEWSPAPER PRESSES are in an enviable position for meeting demands for more and more color advertising —

because of the unequaled ease with which additional color-printing mechanisms can be incorporated in these presses at any time that further color facilities are required.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

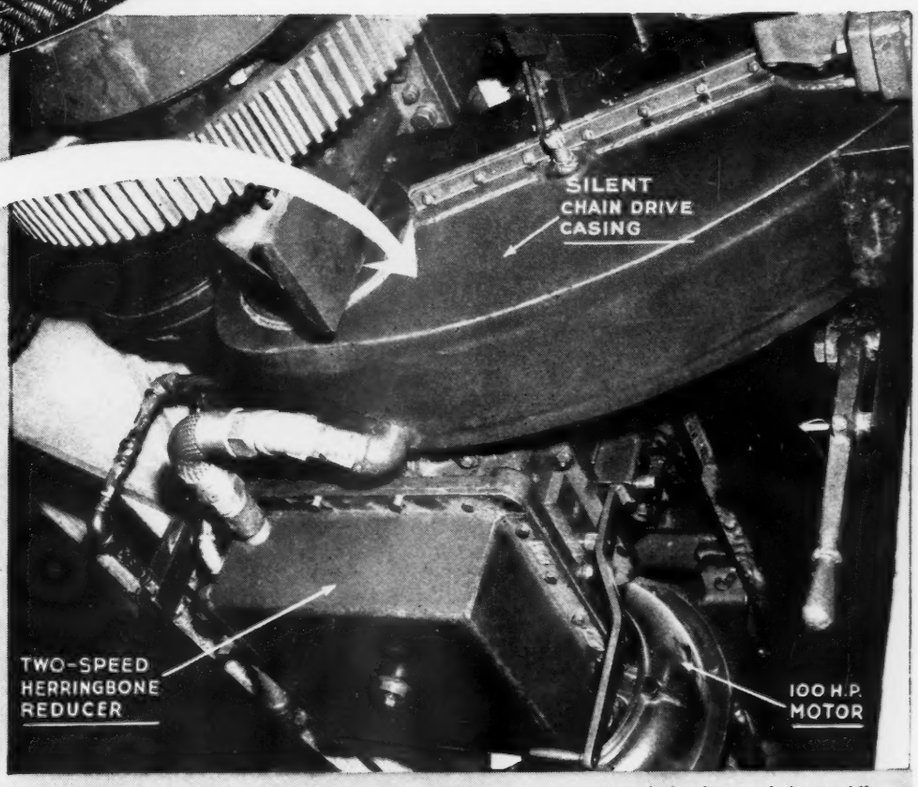
For The BEST In Press Performance

LINK-BELT *Silverstreak* Silent Chain Drive

Better Register

Dependable

Low Maintenance Cost



Link-Belt High-Speed Silent Chain Drive from a 100 h.p. motor to line shaft of one of the world's fastest newspaper printing presses . . . Silent Chain operating in oil-tight casing, runs to 3850 or 4700 feet per minute, the speed being preset through a two-speed gear box.

Flexible as a belt, positive as a gear — and more efficient than either! That was proved when Link-Belt Silverstreak Silent Chain Drives were first introduced. That proof is doubly important today with higher press speeds, increased power, and accurate register.

Designed for long-life service in both newspaper and commercial printing presses, these drives are positive in action, dependable, are unaffected by atmospheric conditions, and require practically no attention or upkeep. Easily applied, they can often simplify press construction.

For complete information on your specific needs, get in touch with our nearest office.

LINK-BELT COMPANY

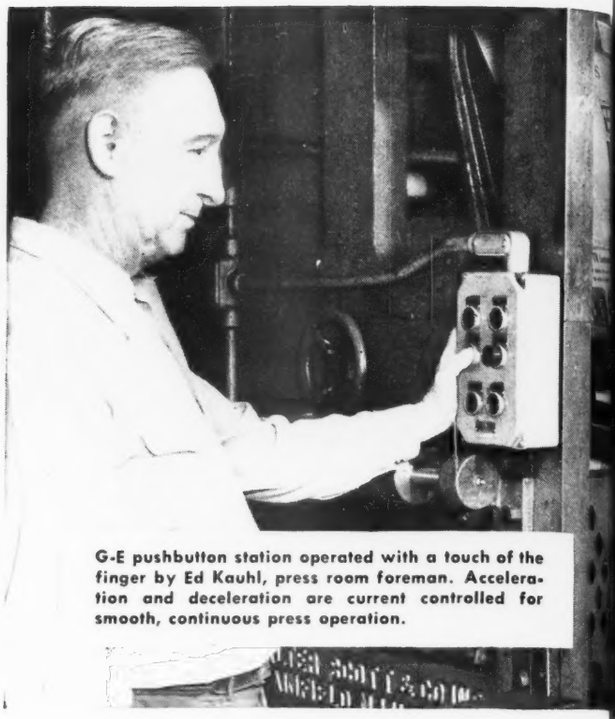
Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices in Principal Cities.

12,080

LINK-BELT *Silverstreak*

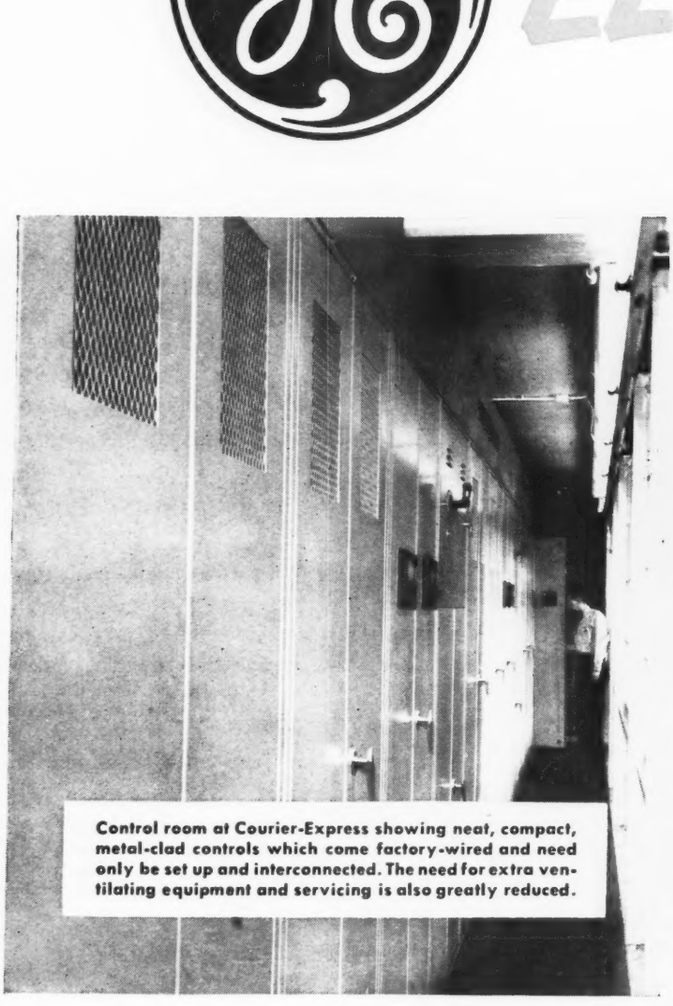
SILENT CHAIN DRIVES

BUFFALO COURIER-EXPRESS says:

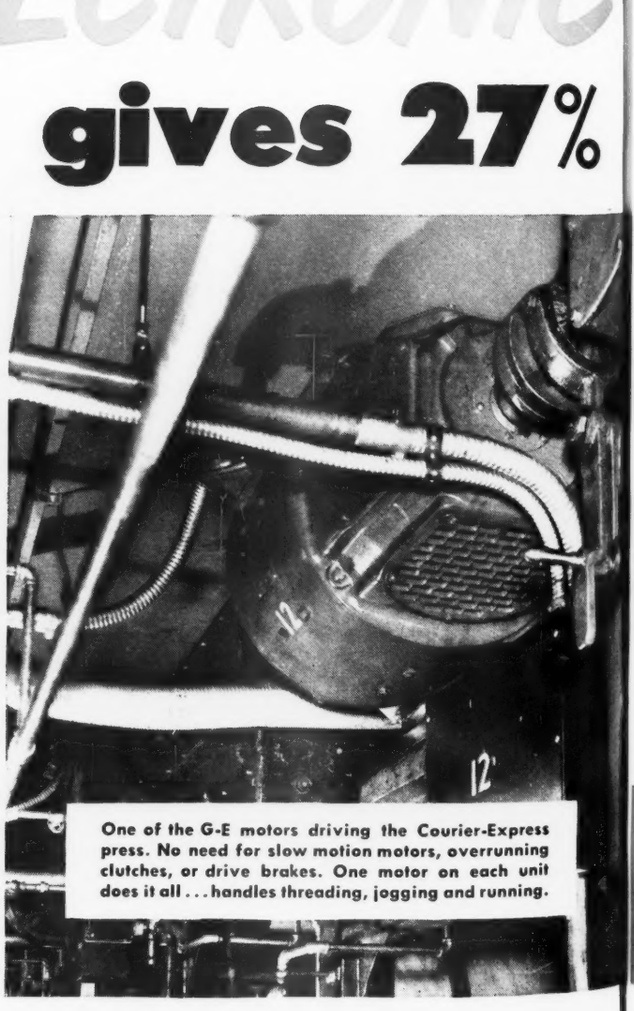


G-E pushbutton station operated with a touch of the finger by Ed Kauhl, press room foreman. Acceleration and deceleration are current controlled for smooth, continuous press operation.

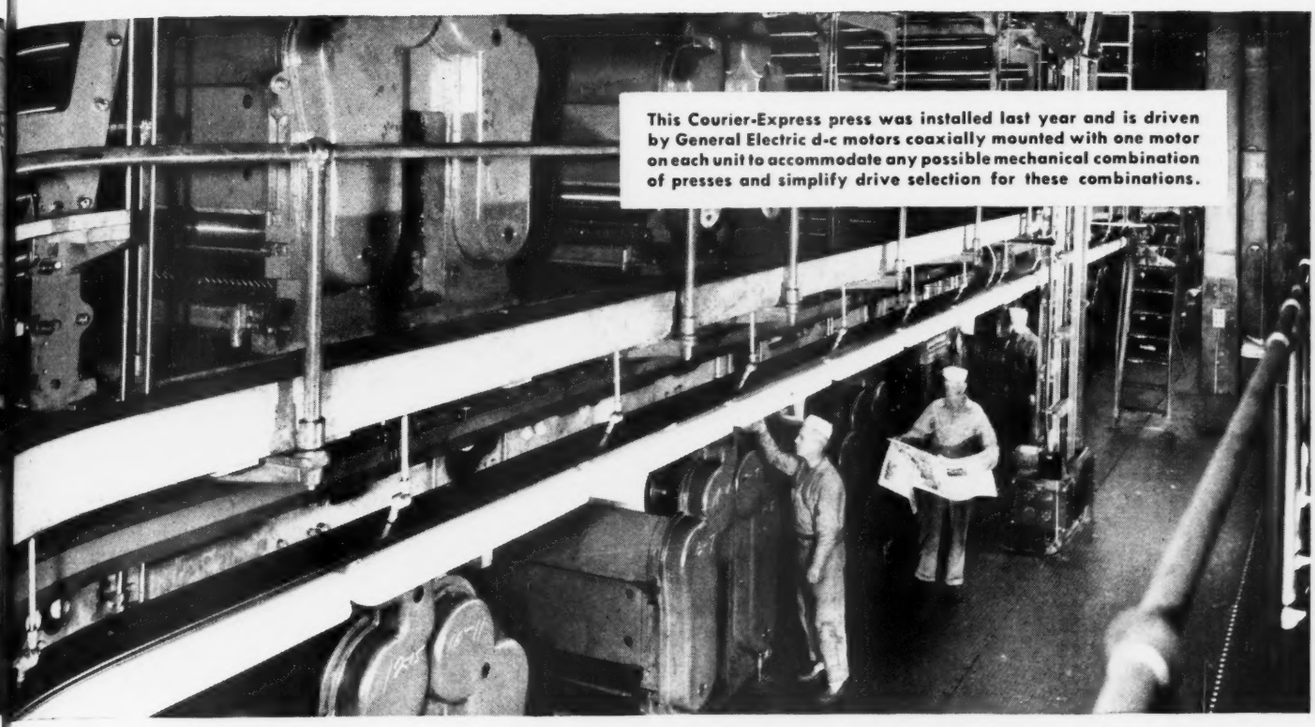
ELECTRONIC gives 27%



Control room at Courier-Express showing neat, compact, metal-clad controls which come factory-wired and need only be set up and interconnected. The need for extra ventilating equipment and servicing is also greatly reduced.



One of the G-E motors driving the Courier-Express press. No need for slow motion motors, overrunning clutches, or drive brakes. One motor on each unit does it all . . . handles threading, jogging and running.



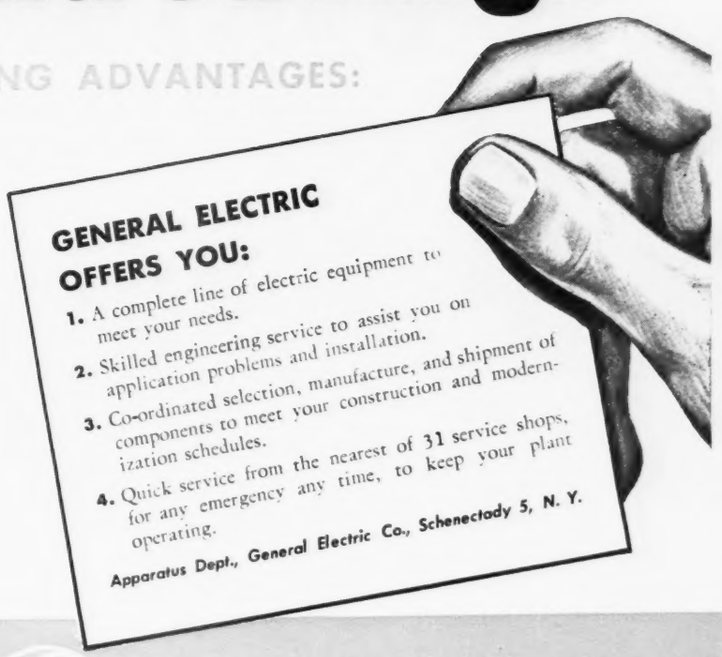
This Courier-Express press was installed last year and is driven by General Electric d-c motors coaxially mounted with one motor on each unit to accommodate any possible mechanical combination of presses and simplify drive selection for these combinations.

C PRESS DRIVE

% kw demand savings

OTHER OUTSTANDING ADVANTAGES:

Increased Operating Flexibility
Minimum Speed Variation
Reduced Power Loss
First Real Stepless Speed Adjustment
Simplified Drive Installation
Easy, Economical Maintenance
Simplified Control Installation
Finger Tip Control Operation


GENERAL ELECTRIC
OFFERS YOU:
1. A complete line of electric equipment to meet your needs.
2. Skilled engineering service to assist you on application problems and installation.
3. Co-ordinated selection, manufacture, and shipment of components to meet your construction and modernization schedules.
4. Quick service from the nearest of 31 service shops, for any emergency any time, to keep your plant operating.
Apparatus Dept., General Electric Co., Schenectady 5, N. Y.

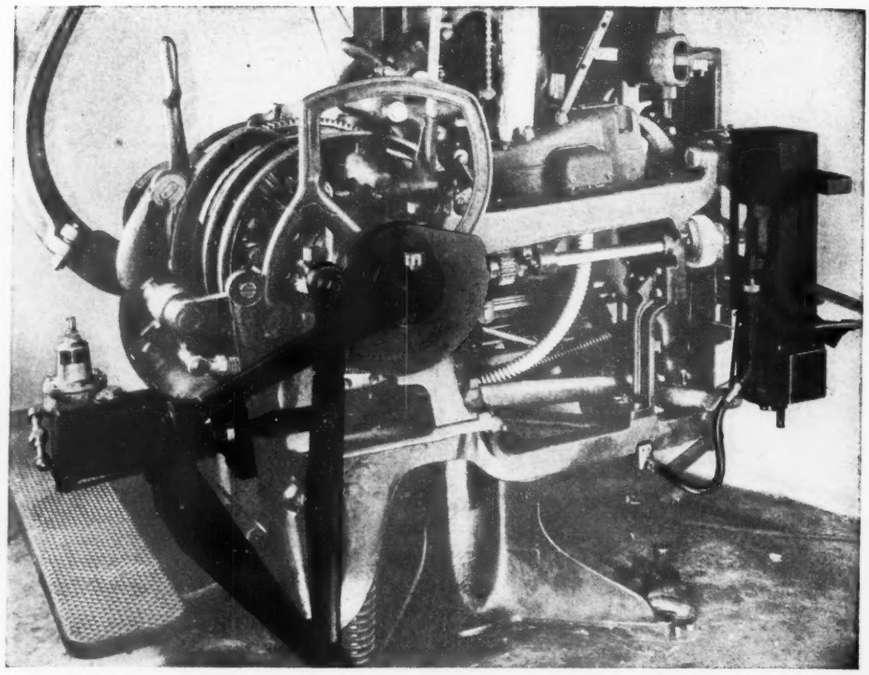
GENERAL ELECTRIC

THIS IS THE SENSATIONAL NEW MODEL OF THE

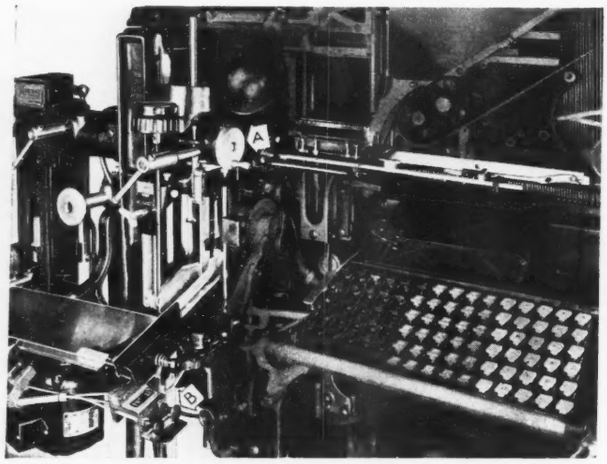
STAR AUTOMATIC QUADDING ATTACHMENT

demonstrated at the Graphic Arts Exposition in September

★



The original basic and successful mechanics of the vise jaw actuation first introduced with the STAR Quadder is retained; but the actuating slide of the quadder is now operated by a separate cam and hydraulic system, instead of by the vise closing and justification lever. This makes the quadder even more independent of the machine than before.



A—Mohr Saw synchronization

B—Operator's Control Button

★

A SECONDARY IMPROVEMENT is one awaited by many, especially in the newspaper field.

The STAR Quadder is now synchronized with the Mohr Saw. A turn of the dial by the operator sets the assembler slide and the vise jaws in one operation and, in the case of the Mohr Saw, the same turn of the dial sets the Mohr Saw as well.

Whether or not the machine is equipped with the Mohr Saw, this labor-saving feature will be part of every STAR Automatic Quadding Attachment.

★

A new descriptive brochure tells all about these developments, and how you can make your old machine, as well as your new one, produce 20 to 50% more in "white space" composition. Write us today to learn how immediate saving can begin.

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
INCORPORATED

Factory and Main Office
SOUTH HACKENSACK, N. J.

Branch Office:
1327 BROADWAY, KANSAS CITY 6, MO.

CHICAGO • MINNEAPOLIS • DENVER • NEW YORK • BOSTON

Less down-time, more running-time with presses on TIMKEN® bearings

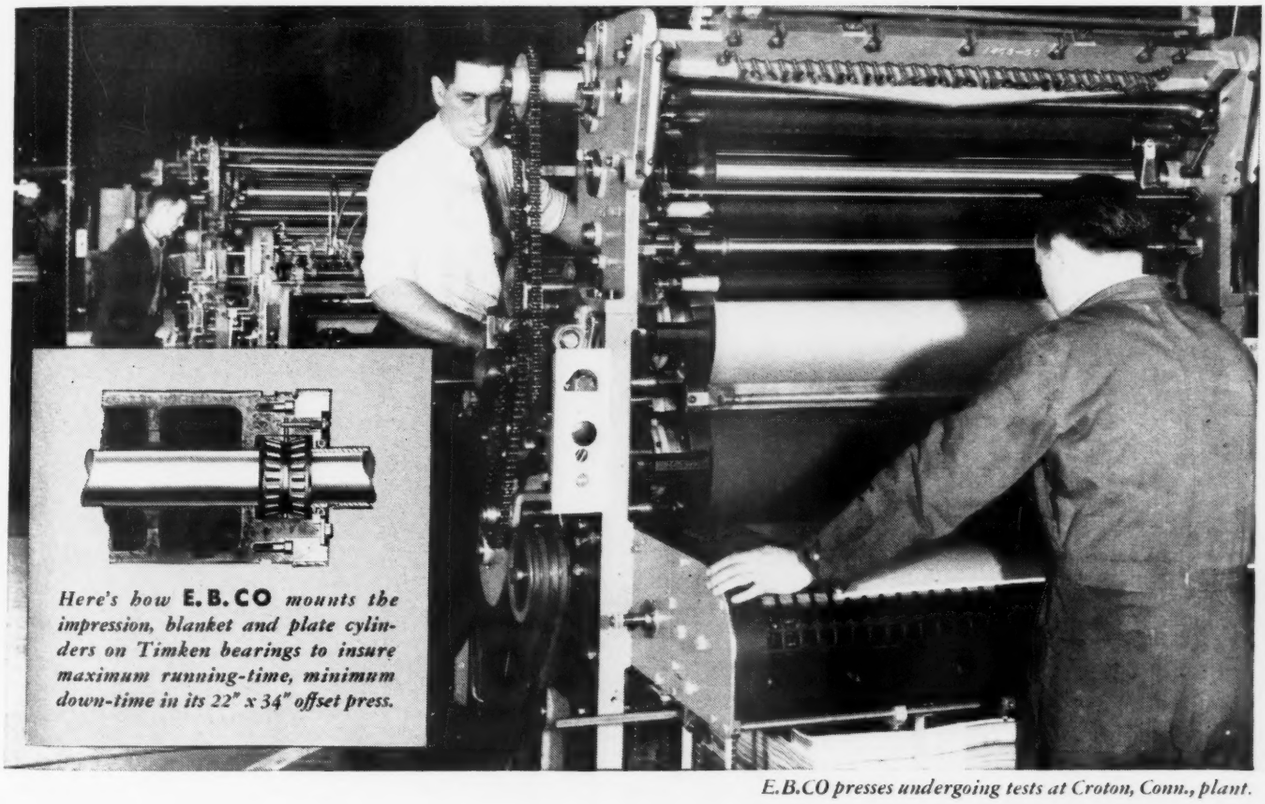
THE impression, blanket and plate cylinders of this E.B.CO offset press made by the Printing Machinery Division, Electric Boat Company, are mounted on pre-loaded Timken® tapered roller bearings to insure continuous, trouble-free performance and consistently high quality lithography.

With Timken bearings on the cylinder shafts maintenance costs are minimized and wear is prevented. Lubrication is accomplished easily, quickly and economically. Longer runs and more IPH are possible because Timken bearings eliminate all speed restrictions due to bearings. Cylinders may be permanently aligned and yet minute pressure adjustments are permitted. The true rolling motion and smooth surface finish of Timken bearings virtually eliminate friction—insure minimum power loss.

Made of Timken fine alloy steel, Timken bearings normally last the life of the press. Rollers and races are case-hardened for resistance to wear and have tough, shock-resistant inner-cores. Line contact between rollers and races permits maximum load-carrying capacity. And the tapered construction of Timken bearings enables them to take any combination of radial and thrust loads.

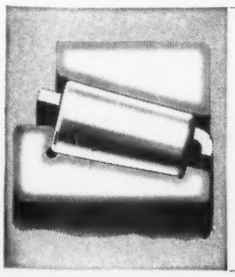
No other bearings give you all the advantages of Timken tapered roller bearings. Wherever bearing precision and long, trouble-free service are important, make sure the trade-mark "Timken" is on the bearings of machines you build or buy. Timken bearings are backed by 50 years of bearing research and development. They're No. 1 choice throughout industry. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



Here's how **E.B.CO** *mounts the impression, blanket and plate cylinders on Timken bearings to insure maximum running-time, minimum down-time in its 22" x 34" offset press.*

E.B.CO presses undergoing tests at Croton, Conn., plant.



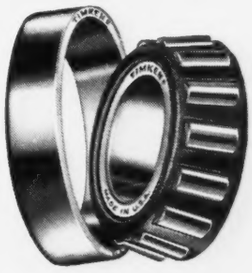
GREATER LOAD AREA

Because the load is carried on the *line* of contact between rollers and races, Timken bearings carry greater loads, hold shafts in line, wear longer. The Timken Roller Bearing Company is the acknowledged leader in: 1. advanced design; 2. precision manufacturing; 3. rigid quality control; 4. special analysis steels.

TIMKEN

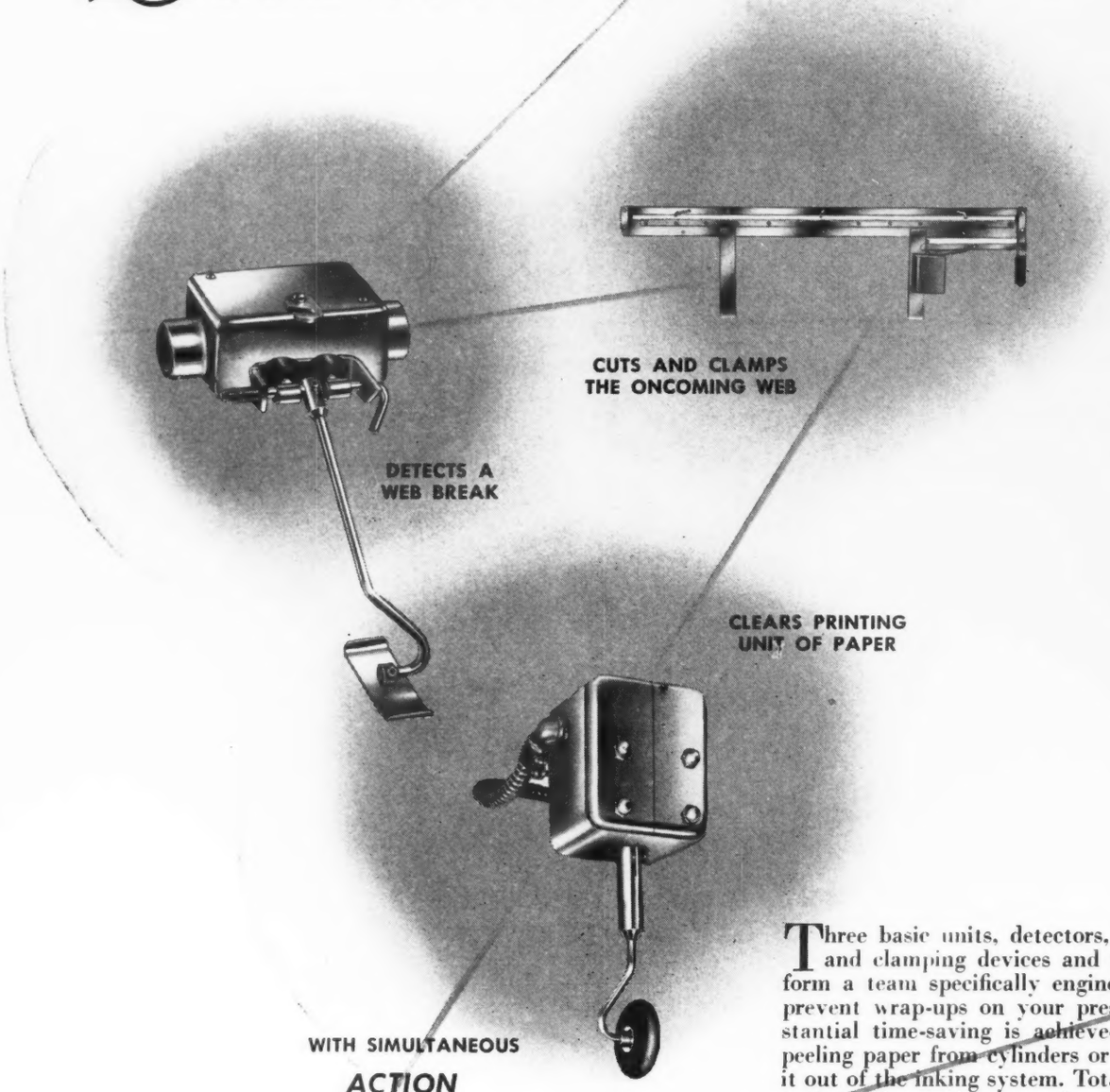
TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ◎ AND THRUST →◎← LOADS OR ANY COMBINATION ✳

Quick as a wink... THE COOKSEY SYSTEM



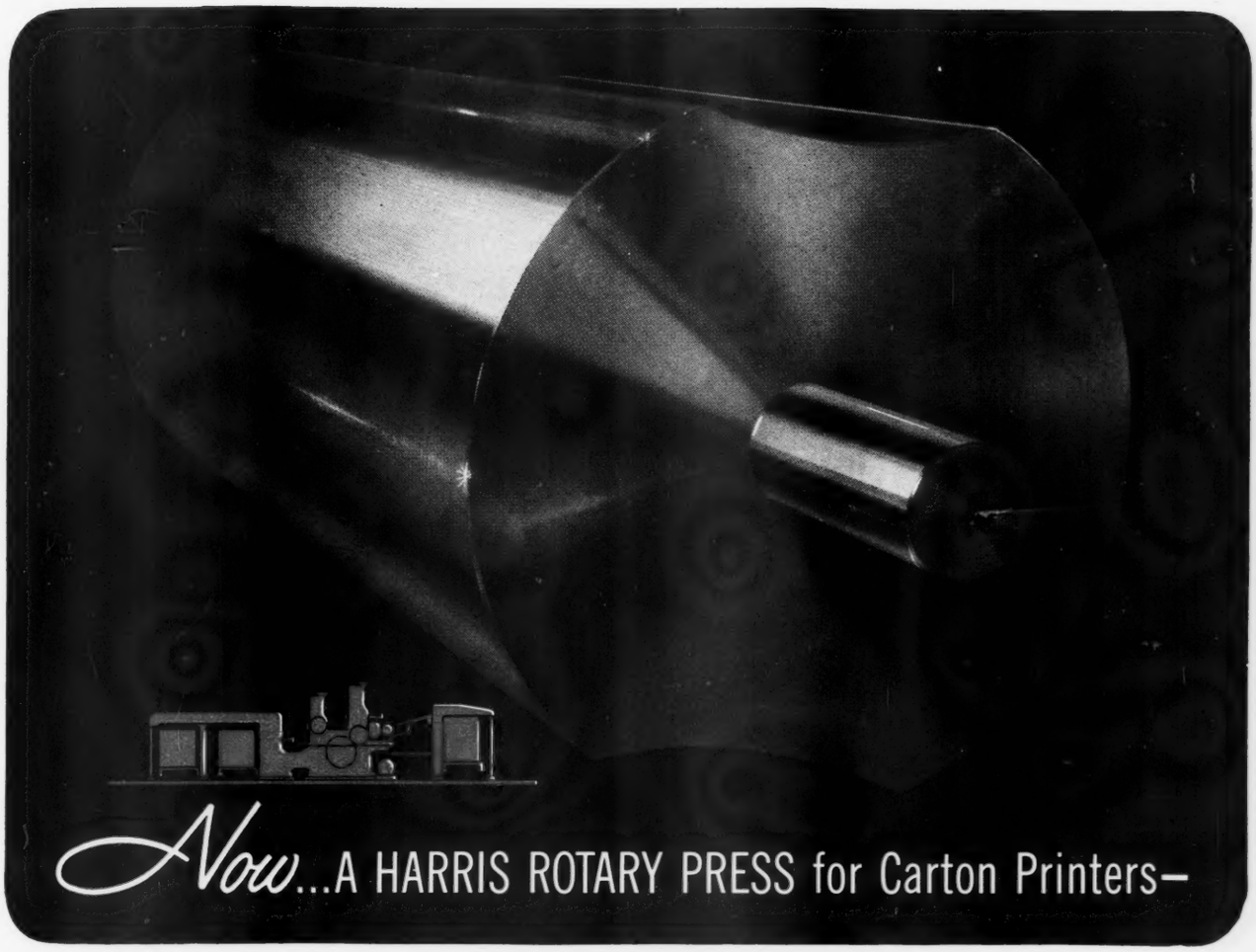
Three basic units, detectors, cutting and clamping devices and trolleys, form a team specifically engineered to prevent wrap-ups on your press. Substantial time-saving is achieved . . . no peeling paper from cylinders or picking it out of the inking system. Total elimination of smashes greatly increases blanket life. With the Cooksey System, the only time loss is the few minutes required to rethread the web following a break.

Progressive plants throughout the country are investigating and installing Cooksey System. *Have you written for your copy of our folder describing its operation?* IF NOT, DO SO RIGHT NOW.

Collmar Corporation

35 E. WACKER DRIVE, CHICAGO 1, ILLINOIS

SALES AGENTS: Goss Printing Press Company, CHICAGO; R. Hoe & Company, Inc., NEW YORK CITY; Wood Newspaper Machinery Corp., NEW YORK CITY



Now...A HARRIS ROTARY PRESS for Carton Printers—

with ONLY ONE CYLINDER *for transfer*

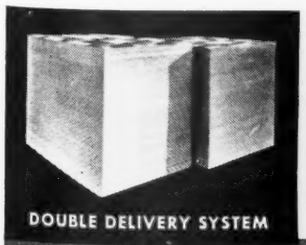
Sheets get less handling during transfer in this new Harris letterpress. A *single cylinder* between units, with the transfer grippers making only one grip and one release, protects register and prevents damage to sheets.

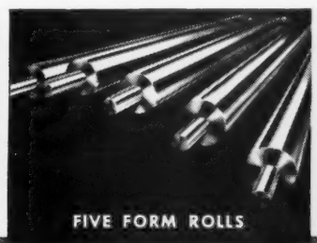
It is just one of the many ways in which Harris has designed a rotary two-color 45 x 65″ press to meet the special problems of the carton making industry.

For instance, *5 form rollers* on each color unit of this new, Harris letterpress assures smooth, even coverage on the most difficult solid carton designs. *Standard plate cylinders* take plates from existing precision plate-making equipment. The *double delivery* system gives twice as much drying time for finished sheets. It allows the piles to be unloaded without stopping the press. Harris *feed roll* register system gives positive control of front register without damage to the sheet.

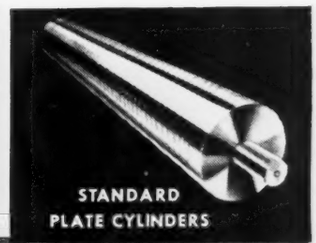
Carton printing can be made more profitable. May we discuss how this new rotary press can increase your production?

HARRIS-SEYBOLD COMPANY
GENERAL OFFICES, CLEVELAND 5, OHIO


DOUBLE DELIVERY SYSTEM


FIVE FORM ROLLS

FEED ROLL REGISTER


STANDARD PLATE CYLINDERS

CHECK THESE FEATURES WITH MEN WHO PRINT BY THEM

Keeping in Touch

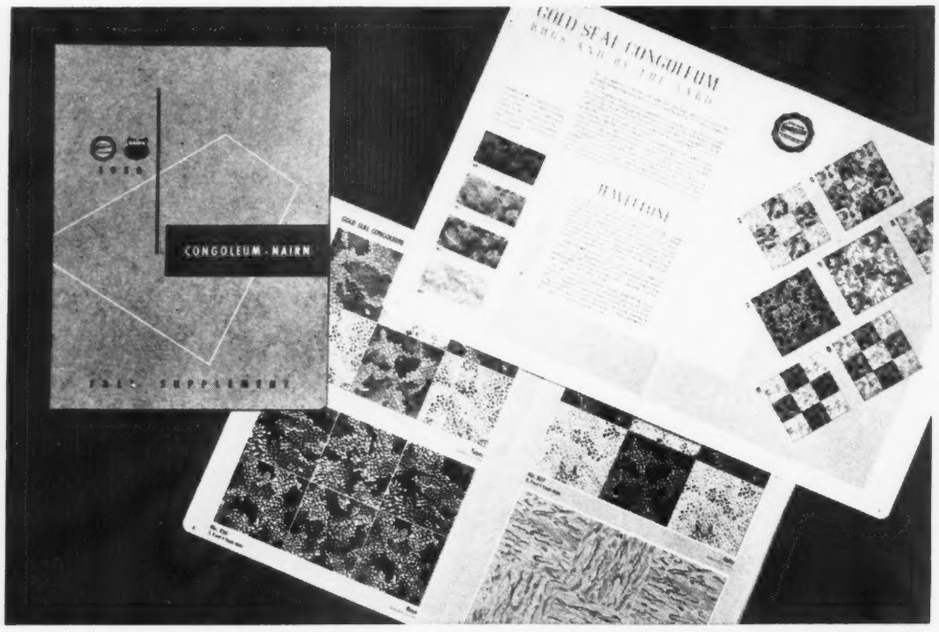
International Printing Ink ®

31 Branch Offices in Principal Cities

IPI, Everyday, Holdfast, Match Box and Gemtone are trade marks of Interchemical Corporation

IPI • DIVISION OF INTERCHEMICAL CORPORATION • 67 WEST 44TH STREET, N. Y. 18 • ADDRESS INQUIRIES DEPT. A

GEMTONE INKS ADD LIFE, SNAP & SPARKLE TO COLORFUL CONGOLEUM-NAIRN CATALOG



This Congoleum-Nairn catalog is another fine example of the realism IPI Gemtone Inks give to 4-color process work. Have your IPI salesman show you his copy of this outstanding job printed by Commanday-Roth, of New York City. You'll be amazed at the three-dimensional effect of this printing.

Commanday-Roth Scores New High in Realistic Effects with IPI Gemtone Process Inks

You doubt your eyes. Then you can't believe your fingers when you go through this 1950 Congoleum-Nairn catalog supplement. Commanday-Roth Co., Inc., of N.Y.C., printed it.

The illusion of depth is so real. The colors are so bright and sparkling. You imagine that actual swatches of *Gold Seal Congoleum** and *Nairn** Linoleum are tipped in.

Reasons for this realism: fine engraving, skilled craftsmanship with IPI Gemtone Inks.

Commanday-Roth merits high praise for a superb printing job. And for their good judgment in choosing Gemtone Inks for this important booklet.

Printers everywhere are learning that all process work prints better with Gemtone. It's a gem in the pressroom. IPI Gemtone Process Inks are made for sheet-fed presses. They dry on top of the sheet, without heat, *fast!* Colors sparkle, halftone dots remain sharp, and highlights bright.

Printers tell us that Gemtone Inks just won't crystallize. They trap beautifully even with a long delay between colors. And their "premium finish" brings you a premium price.

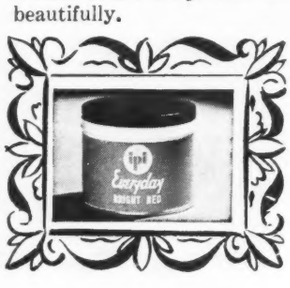
See for yourself this remarkable proof of what printing savvy and the right inks can do. Ask your IPI representative to show you his copy of this outstanding Congoleum-Nairn catalog.

Send for the free Gemtone Comparison folder today from your nearest IPI branch, or from IPI headquarters.

**Registered trade-marks of Congoleum-Nairn, Inc.*

PICTURE OF AMERICA'S LARGEST-SELLING PACKAGED PRINTING INK—EVERYDAY

Picture your plant with the *complete* Everyday line. No other inks. 25 colors, 11 blacks, 6 whites, bond and poster inks and needed compounds do 96% of your work. The IPI Match-Box does the rest—those fussy color matches. Everyday inks even do four-color process work beautifully.



FREE! 16 PAGES FROM '51 U.S. CAMERA ANNUAL PRINTED WITH NEW IPI BLACKS

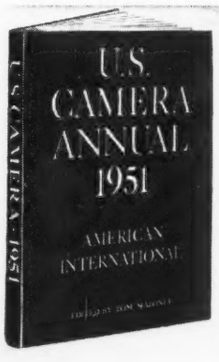
Want a free 16 page signature of prize pictures from the 1951 U. S. Camera Annual—the world's "most wanted" photo book? We'll be glad to send you one.

It shows the latest IPI Holdfast Halftone Black. A black more rub and scratch resistant than ever before.

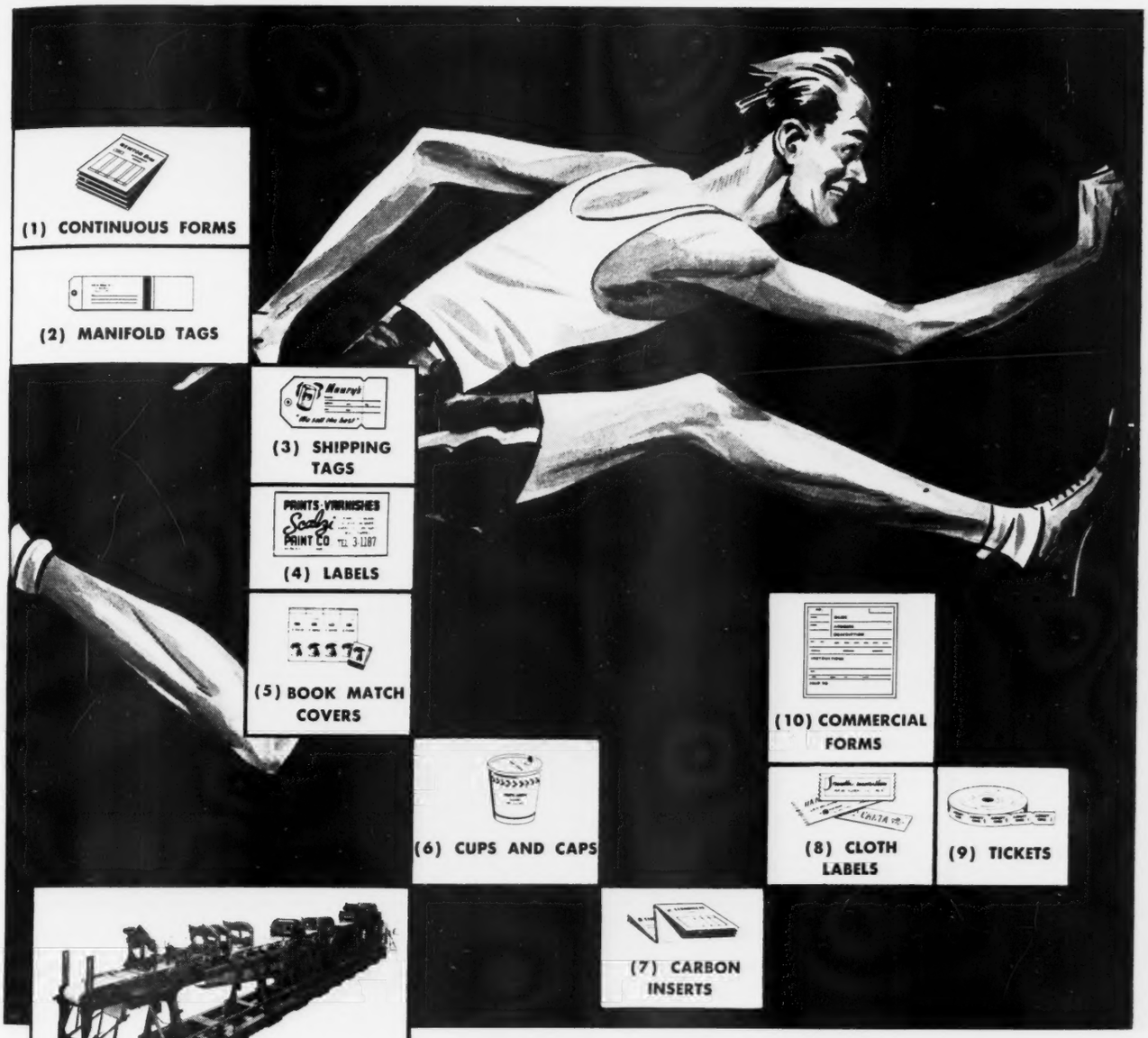
See how the finer pigment dispersion in this new IPI black gives you a blacker black and more finish without objectionable bronzing or gloss.

See how IPI inks give true reproduction of prize shots.

Ask your IPI representative for your free 16 page signature. Or write IPI, 67 West 44 St., New York 18, N. Y.



Once again it's printed with IPI inks. **U. S. Camera Annual has been printed with IPI blacks and process inks for 16 straight years.**



Decathlon Winner!

A track athlete must be outstandingly *versatile* to win a 10-event decathlon contest. He's a rare man, and the sports world is quick to honor him.

A press must be outstandingly *versatile,* too, to handle the above ten jobs. The New Era multi-process press has this versatility, through the addition of the attachments required to produce each product. And this press has the rare ability to deliver top-quality work consistently.

One run through the flat bed, roll fed New Era press and the work is delivered rewound, zig-zag folded, or in sheets. For perforating . . . punching . . . slitting . . . die-cutting . . . and other optional operations, standardized attachments are added.

Gold cups and medals? They're not given out for superlative press performance. But credit *is* . . . just ask the printer who uses a New Era.

NEW ERA

MANUFACTURING CO.,

375—11th Avenue, Paterson 4, New Jersey

Write For Bulletin No. 11

7172

New GOSS UNIVERSAL PRESS

Selected by publishers from coast to coast, the new Goss Universal Press already has established itself as the compact, web fed, semi-cylindrical rotary for newspapers that need big press advantages *without* big press cost

The Universal will produce 36,000-40,000 papers per hour. It is single width, two plates wide—four-page capacity straight, 8-page collect. Unit design permits four or eight-page additions to the press capacity, provides more accessibility.

THE CHOICE OF...

KANKAKEE (Ill.) JOURNAL

SAN ANGELO (Tex.) STANDARD and STANDARD-TIMES

YAKIMA (Wash.) HERALD and REPUBLIC

SALISBURY (N.C.) POST

ABILENE (Tex.) REPORTER-NEWS

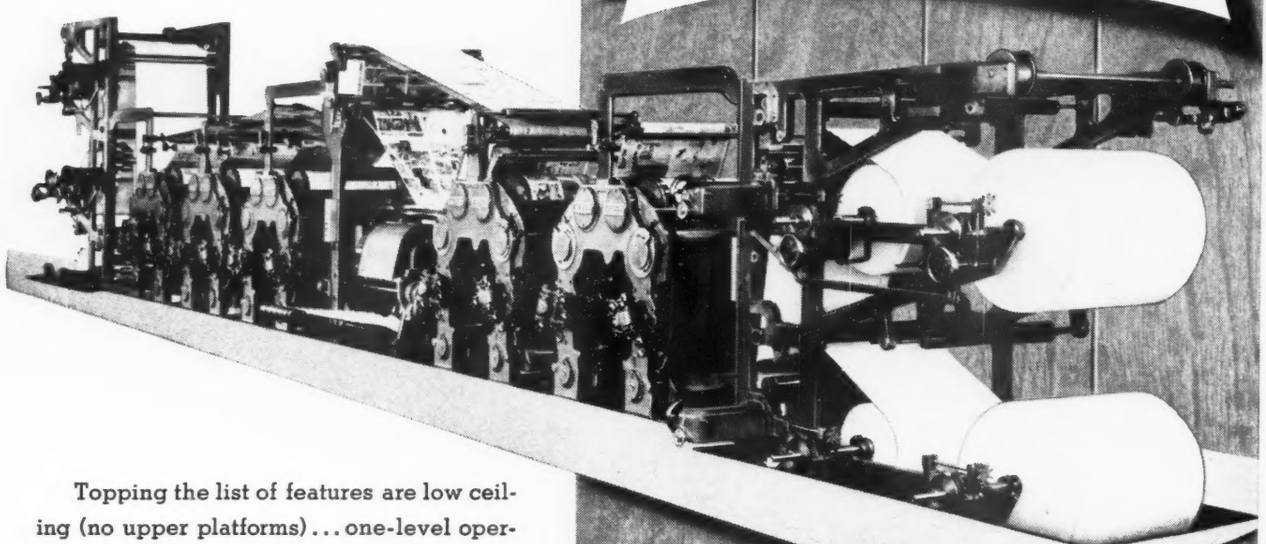
TEMPLE (Tex.) TELEGRAM

BOISE (Ida.) STATESMAN

SAN MATEO (Cal.) TIMES and NEWS LEADER

OIL CITY (Pa.) DERRICK and BLIZZARD

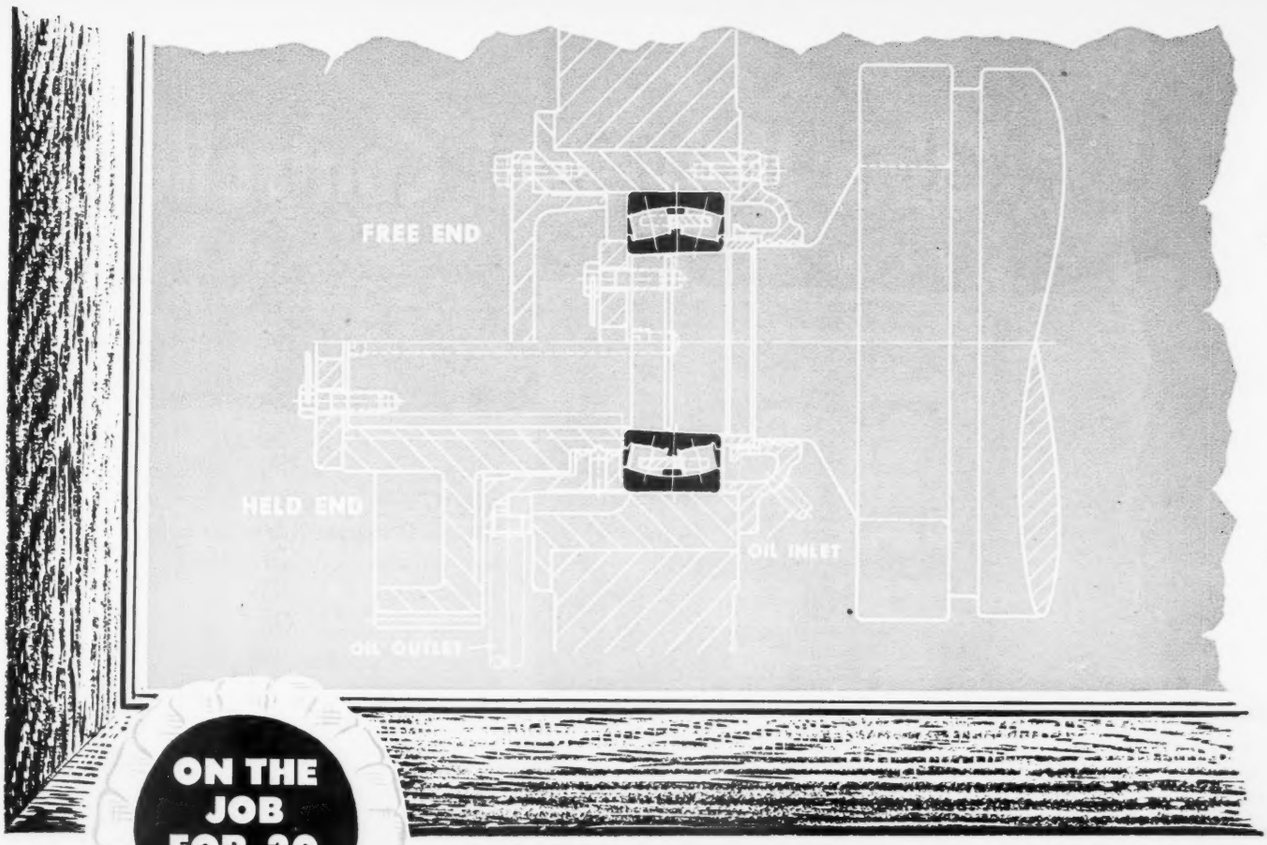
NEW CASTLE (Ind.) COURIER-TIMES



Topping the list of features are low ceiling (no upper platforms)... one-level operation... no angle bars, no bay windows... continuous feed ink system... underneath or end paper feed... complete color flexibility...folder delivery either side. Add the traditional Goss features of quality printing, precision construction, safety, and economical operation... and you have the main reasons for Universal popularity. The rest are contained in a new illustrated bulletin. Send for it.

THE GOSS PRINTING PRESS CO.
1535 S. Paulina St., Chicago 8
Duplex Division: Battle Creek, Mich.
Goss Printing Press Co., Ltd., Preston, England

it's **GOSS** *again*



ON THE JOB FOR 20 YEARS

SKF Self-Aligning Printing Cylinder Bearing ON ALL TYPES OF PRINTING PRESSES

The SKF Self-Aligning Printing Cylinder Bearing answers the printing press builder's specifications for a bearing with a "large bore and relatively small outside diameter."

Proper fitting built into each bearing at the factory. No adjustments are necessary if replacement bearings are ever required.

Precision tolerances are applied to important dimensions.

Removal without damage to bearings is accomplished with SKF's system of hydraulic removal.

Simplified design. The SKF design eliminates the need for an additional bearing to stabilize the cylinders or to take gear thrust.

Low temperature. Normal temperature at all times under heavy impression loads. Thereby, undue expansion of the eccentric boxes in the frames is eliminated.

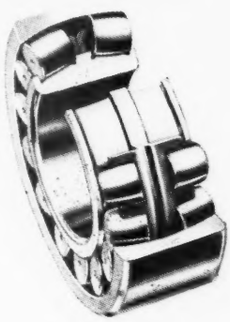
The engineering features of bearing and mounting have resulted in its wide acceptance on . . .

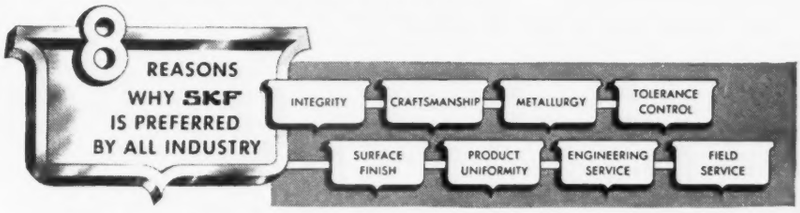
NEWSPAPER PRESSES, black and color units
MAGAZINE PRESSES
METAL AND PAPER OFFSET PRESSES, both sheet and web fed
GRAVURE PRESSES

An SKF Engineer is always at your service to help you secure the right bearing for your job. His advice is sound . . . you'll find it profitable.

SKF *Industries, Inc., Philadelphia 32, Pa.* 7078

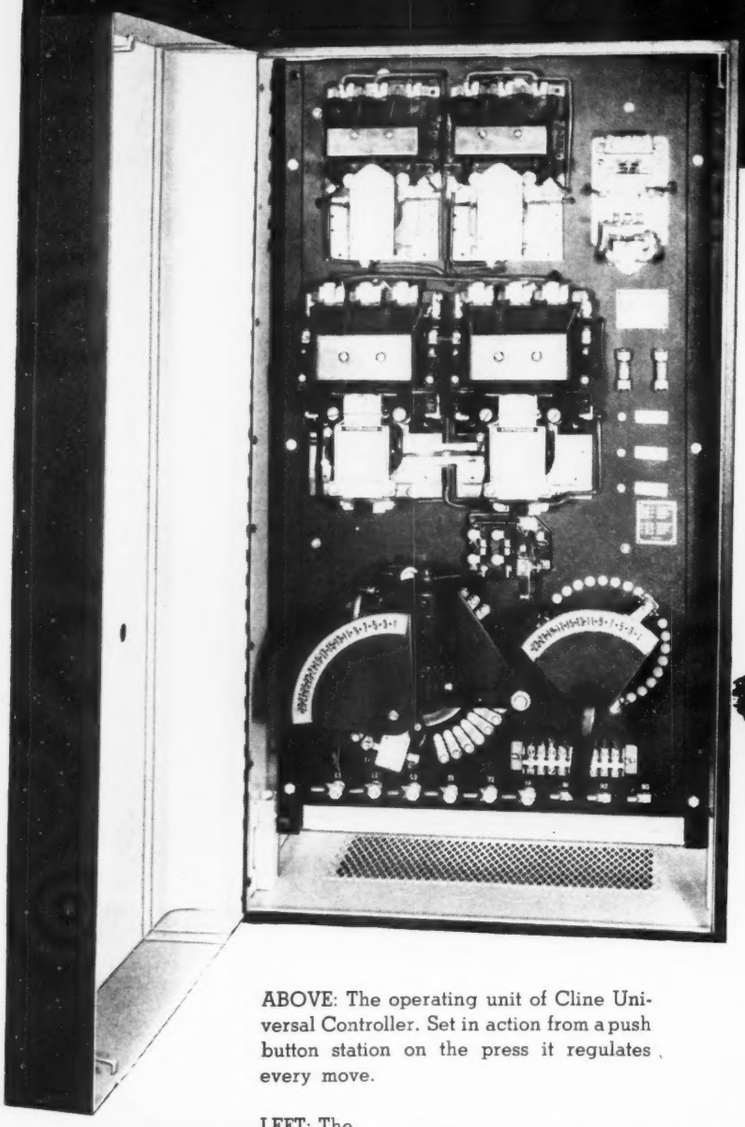
SKF
BALL AND ROLLER BEARINGS





Pioneers of the Deep Groove Ball Bearing – Spherical Roller Bearing – Self-Aligning Ball Bearing

Cline Universal Controller



NOW, more than ever, Cline Electrical Equipment is "Boss of the Press." For the new Cline Universal Controller (operated by the Pressman from his push-button station) provides perfect control and regulation of presses.

The Universal Control is designed for Rotary, Cylinder, Flat Bed and Carton Presses; Paper Bag, Cloth Bag and Binder Machines; Folders and Gluers and any other application requiring similar control characteristics.

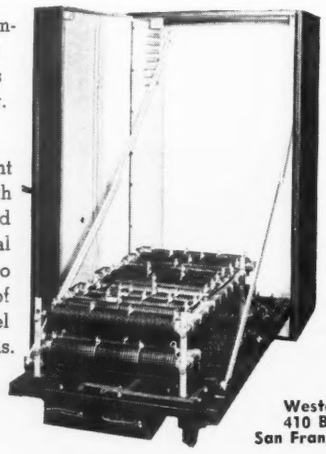
CLINE-WESTINGHOUSE
ELECTRICAL EQUIPMENT

Cline Universal Controllers are ideally suited for all presses requiring inching; high starting torque; slow down speed regulation in forward rotation as well as slow speed in reverse rotation.

Let Cline Engineers help with your problem. More than 40 years of specialized "know how," plus an engineering staff covering the country, makes Cline Service and Equipment outstanding.

ABOVE: The operating unit of Cline Universal Controller. Set in action from a push button station on the press it regulates every move.

LEFT: The modern streamlined cabinet which houses the controller.



RIGHT: Front view with panel tilted out. Unusual accessibility to all back of panel connections.

CLINE ELECTRIC MFG. CO.
NEW ADDRESS...MAIN OFFICE
3405 West 47th Street • Chicago 32

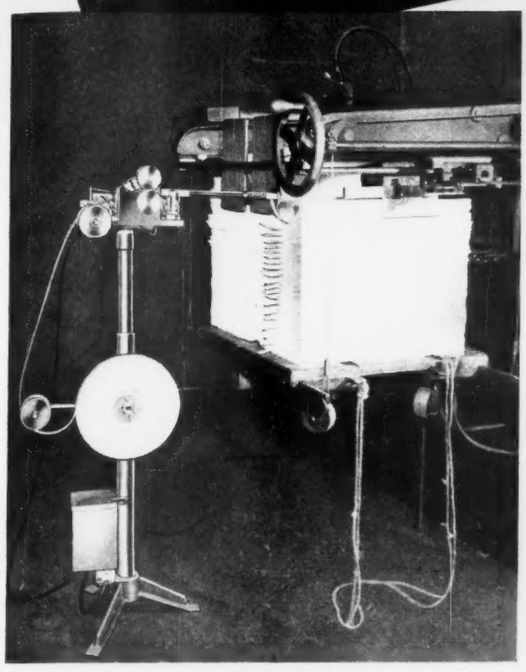
Western Office:
410 Bush Street
San Francisco 8, Calif.

CLINE SYSTEM

Eastern Office:
220 East 42nd St.
New York 17, N. Y.

THE BIG HIT AT THE CHICAGO GRAPHIC ARTS EXPOSITION

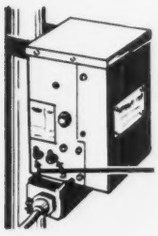
TALLY-TAB®



The Modern Accurate Way to Insert a Tab Into the Delivery Pile on Your Press — Eliminating Hand Counting and Inaccurate Tabbing.

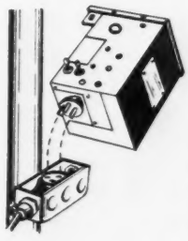
Just the thing for any Print Shop or Offset plant. Counts off in 50's, 100's and 500's, for wrapping and packaging of letterheads, forms, inserts, brochures, folders, etc.

Piles accurately counted lifts for padding, cutting, folding and further processing. Indispensable for LABEL PRINTING at the delivery end of varnishing machines. FOLDING BOX MANUFACTURERS too, find the TALLY-TAB invaluable in eliminating hand counting.



STANDARD TIMER

A flick of these switches sets your machine to count 50's, 100's, or 500's. Simple as can be.



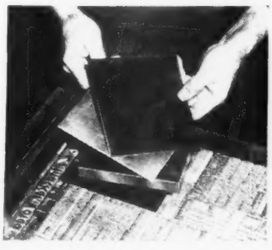
SPECIAL TIMER

This timer is made to order to count any special number needed. To change over — simply remove Standard Timer and insert this one.

Save Manpower through Lightness . . .

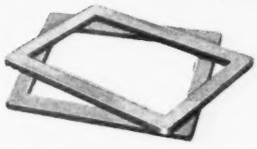
BY USING THESE FEATHER-LIGHT HILLS-McCANNA MAGNESIUM PRODUCTS

FAIRCHILD ENGRAVING, RUBBER AND PLASTIC PLATE MOUNTING BASE



This solid base material is made from non-warping, long life magnesium, weighing 1/6th that of Type Metal. Provides an excellent means of mounting Fairchild Plastic Plates into position for mat making or direct printing by flatbed; also, forms a perfect back-up for rubber plates. Comes in any size up to 20 x 26.

FOUNDRY CHASES

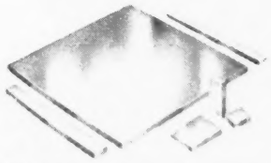


No more back-breaking toil handling heavy forms for molding or proofing. Chases are one-fourth the weight of steel, possessing high strength. Tested by leading printers and various research groups.

PRINTERS' FURNITURE

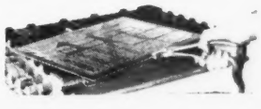
Needless dead weight can now be done away with through feather-light Hills - McCanna Magnesium Alloy Furniture. Saves on power—offers greater life and efficiency. Comes in all standard sizes.

COMPOSING ROOM BLOCKS



This is one of the greatest improvements for the Printing Industry in years. Blocks come in solid form in any size desired—for 11 point electros, stereotypes, Ludlow slug height as well as for 16 gauge halftones and zincs. Not affected by atmospheric conditions—accurate at all times.

ENGRAVER'S TONGS



The delight of any engraver for lightness and handiness. Offer excellent gripping surface with "no-slip" features. Stop fatigue!

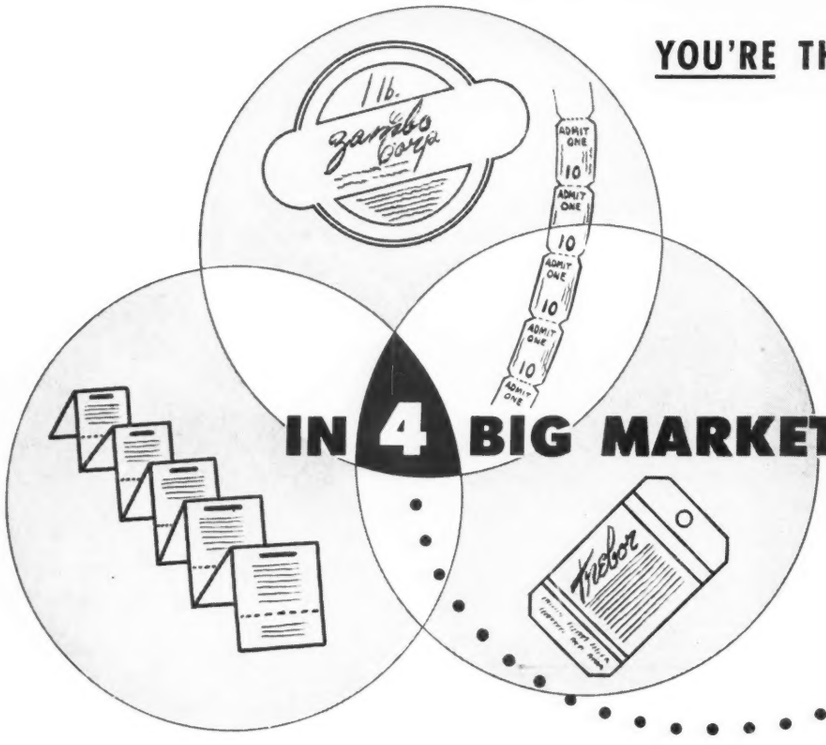
PROOFING BASE MATERIAL

Available in any size up to and including 20 x 26. Saves lifting heavy steel material and enables workman to make proofs quicker and without fatigue. Comes in thicknesses to handle unmounted zincs, halftones, electros, patent base plates or stereos.

Literature describing these products is available. Write for it.

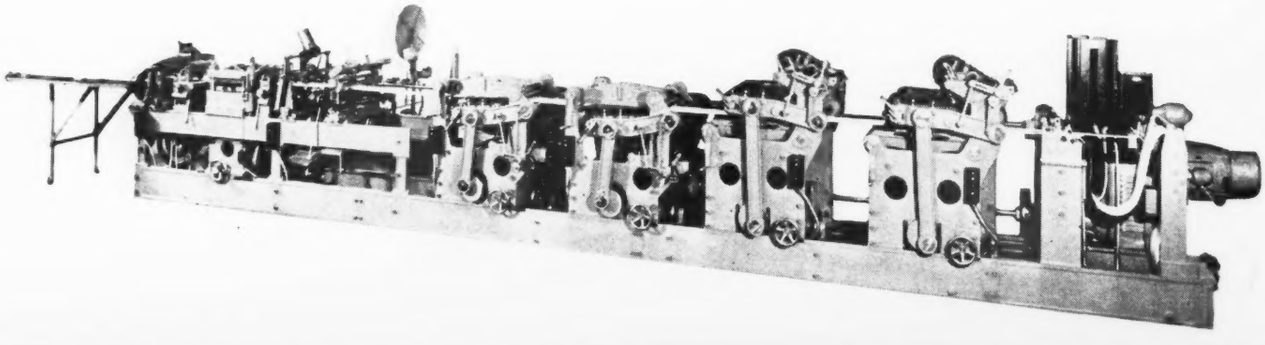
HILLS-McCANNA COMPANY • 3025 NO. WESTERN AVE. • CHICAGO 18, ILL.

with a PEARCE multi-converter



YOU'RE THE TOUGH COMPETITOR

Now, with just *one* press, you can take on lucrative label work, tags, tickets, matchbook covers, etc. . . . produce them in an endless variety of sizes, shapes and colors—at costs that leave competition far behind. ☆ With just *one* press—the rugged Pearce Multi-Converter—you can print two sides in multiple colors, perforate, punch, number, reinforce, eyelet, slot and die-cut. If desired, you can paste and gum, and/or attach a sheet of carbon paper . . . produce flat pack and business machine stationery, or IBM cards within established tolerances. You get a finished product delivered in accurately cut sheets, or rewound in rolls. ☆ Once through the press does all—a streamlined, continuous series of operations at tremendous speed. You're set to compete in a multitude of new markets, to offer printing that steps up efficiency, and adds sales appeal—at low cost. Write for Bulletin 11.



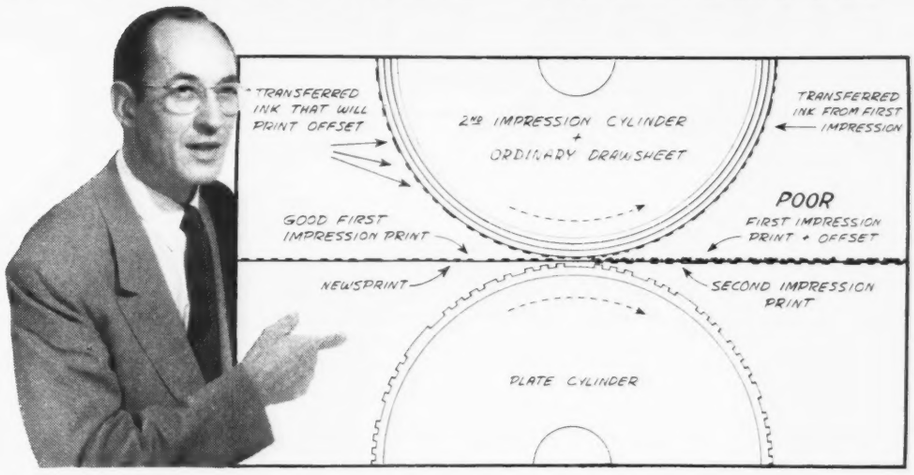
sold by ORVILLE DUTRO & SON, INC.

1206 MAPLE AVENUE ★ LOS ANGELES 15, CALIFORNIA

Here's why 1100 newspapers have switched to "SPHEREKOTE" Drawsheets

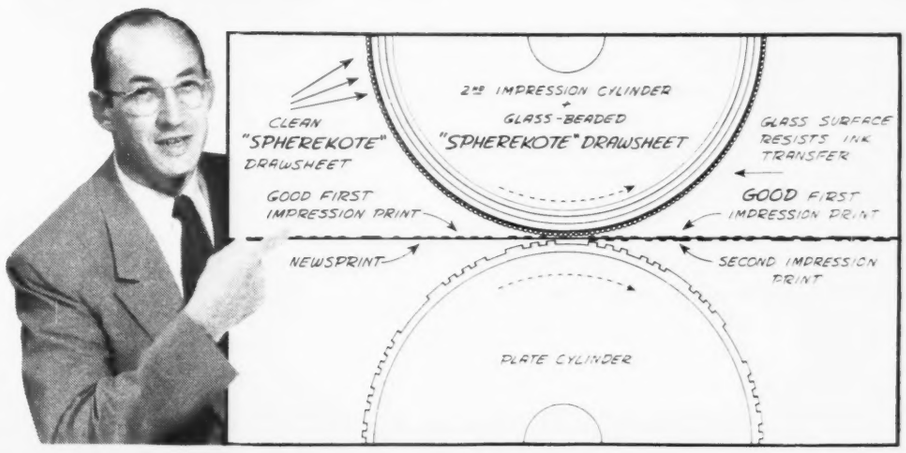
ORDINARY DRAWS PICK UP INK!

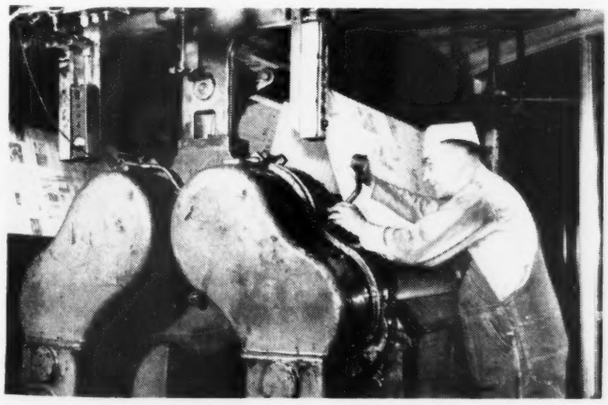
The conventional draw has a coated, ink receptive surface. When it comes in contact with the wet newsprint it picks up and then transfers this ink back to the next first-impression print, producing muddy reproductions.


TRANSFERRED INK THAT WILL PRINT OFFSET
2nd IMPRESSION CYLINDER + ORDINARY DRAWSHEET
TRANSFERRED INK FROM FIRST IMPRESSION
GOOD FIRST IMPRESSION PRINT
POOR FIRST IMPRESSION PRINT + OFFSET
NEWSPRINT
SECOND IMPRESSION PRINT
PLATE CYLINDER

"SPHEREKOTE" DRAWS REPEL INK!

Microscopic glass beads on "Spherekote" Drawsheets repel ink, create a surface that means cleaner, sharper impressions every time. This new drawsheet also lasts for millions of extra impressions, more than saving its slightly higher initial cost.





ENJOY TROUBLE-FREE RUNS with the drawsheet that cuts first-impression offset, produces sharper, cleaner printing on both sides, withstands leader marking, gives you far greater mileage. Ideal for color work as well as black-and-white. Let us put these new draws on *your* presses. Full details from Dept. PE90, or we'll have a representative call if you wish.

REG. U.S. PAT. OFF.

SPHEREKOTE

BRAND

NEWSPAPER DRAWSHEETS AND BLANKETS

- For Large Metropolitan Newspaper Presses:
  Type 26 Drawsheets for three-piece combinations
  Types 83 and 93 Blankets for two-piece combinations
- For Smaller Weekly Newspaper Presses:
  Type 20

Made in U.S.A. by
MINNESOTA MINING & MFG. CO., St. Paul 6, Minnesota

Also makers of "Scotch" Brand Pressure-sensitive Tapes, "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-Slip Surfacing, "3M" Abrasives, "3M" Adhesives.

The Modern Standard in Plate Molding Machines

THE 600 TON 'PLATEMASTER'

- Equal high efficiency in producing plastic, wax, or Tenaplate electrotype molds, stereotype mats and rubber or plastic plates. Proven by leading platemakers.
- Designed and sold by an organizatio· with real experience in plate molding technique, that knows the platemakers' problems.

SPECIFICATIONS

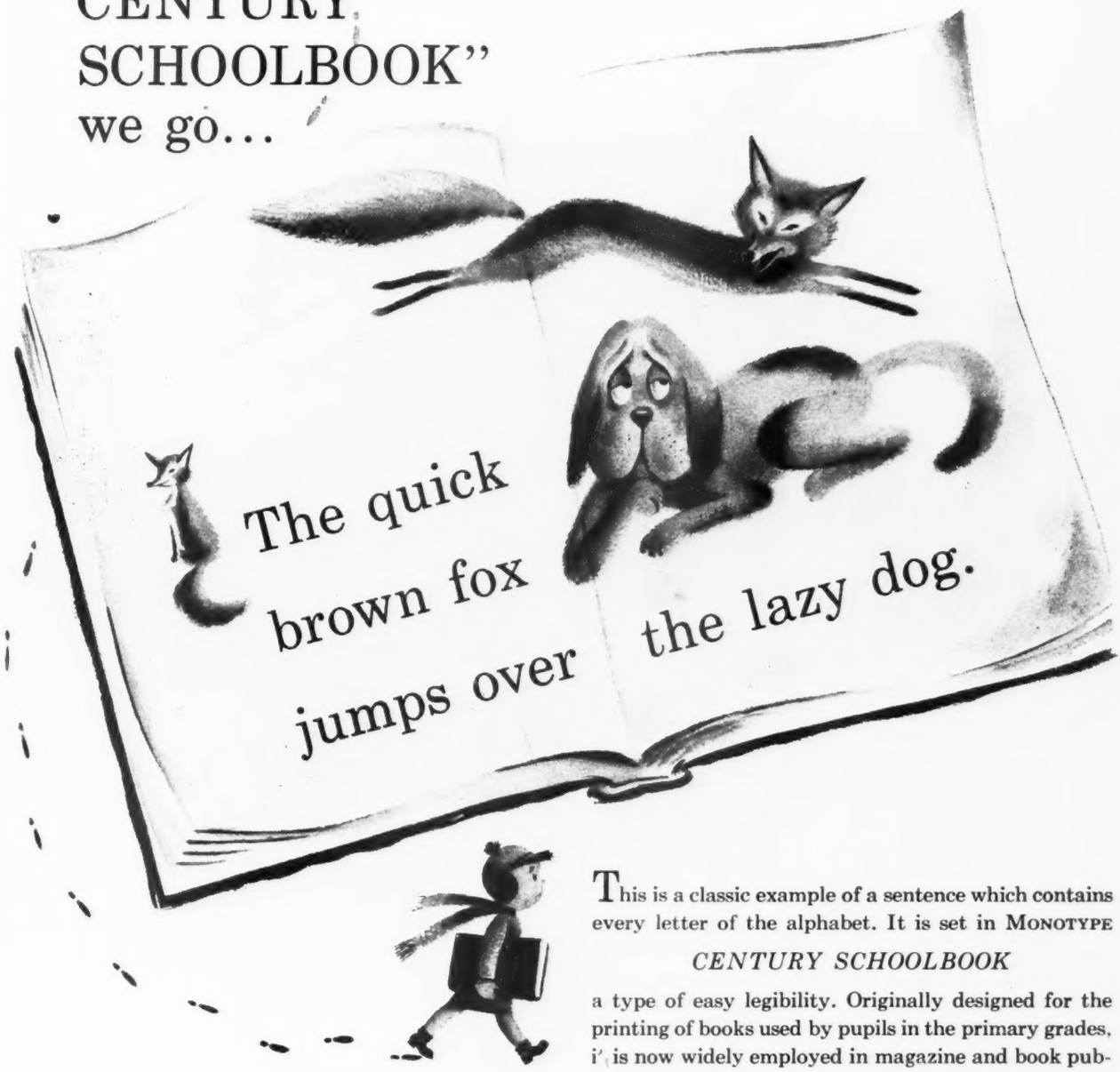
Floor Size	4′ ½″ Width, 5′ 3″ Length
Platen Construction	Meehanite
Pumps	Oilgear
Hydraulic Controls	Oilgear
Closing Time	With 2″ opening 2 seconds
Frame Construction	Single Steel Casting
Max. Molding Pressure	600 Tons
Platen Size	26″ x 30″ x 3½″
Heating Medium	Steam
Ram Diameter	22″ solid casting
Weight	15,500 pounds
Motor	5 h.p./1200 r.p.m.
Max. Daylight Opening	3¼″

Write for complete information and list of installations.

WILLIAMSON & COMPANY

CALDWELL, NEW JERSEY

off to "CENTURY SCHOOLBOOK" we go...



This is a classic example of a sentence which contains every letter of the alphabet. It is set in MONOTYPE

CENTURY SCHOOLBOOK

a type of easy legibility. Originally designed for the printing of books used by pupils in the primary grades, it is now widely employed in magazine and book publishing and for commercial printing. The height and weight of the face, the relation of the heavy and light lines, the length of the ascenders and descenders, the influence of the serifs and the amount of white space on the inside and outside of each letter were all carefully considered when Century Schoolbook was designed. Available in 6 to 18 point . . . in No. 420 Roman and Italic, and No. 620 Boldface . . . machine composition.

THERE IS ONLY ONE **monotype**

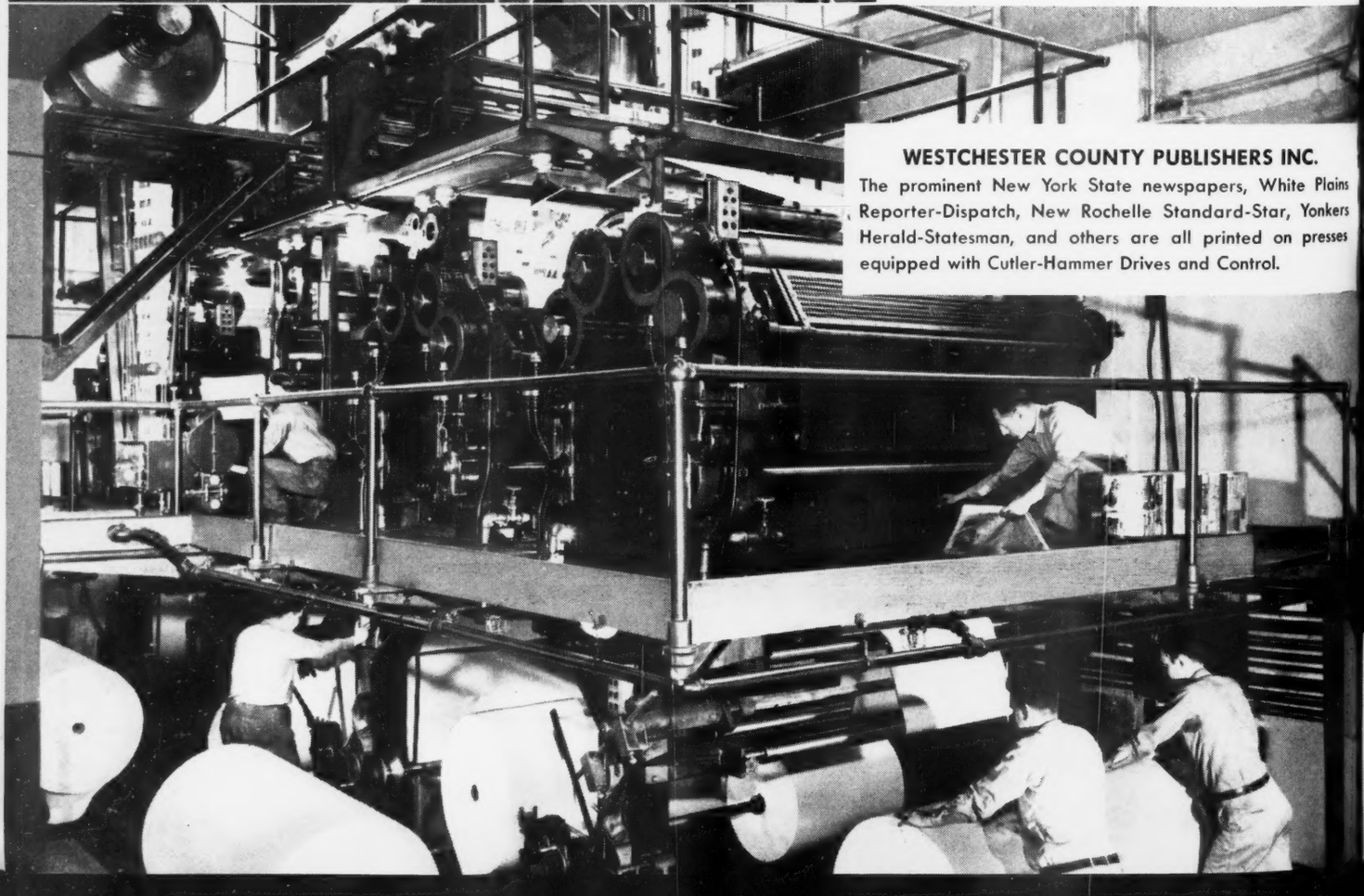
Specify MONOTYPE For the Finest in Printing

LANSTON MONOTYPE MACHINE COMPANY, 24th and Locust Streets, Philadelphia 3, Pa.

A note about the type—Text in 9 pt. Monotype Century Schoolbook 420AB, 3½ pt. leading; subhead, 10 pt. 420C; signature in 8pt. Alternate Gothic 51J; Display enlarged by photo-engraving

ST. LOUIS POST-DISPATCH

One of America's greatest newspapers, exerting an influence out of proportion to its circulation. All black and white editions of this paper are produced on the Wood Presses shown here, equipped with Cutler-Hammer Press Drives, Conveyors and Control.



WESTCHESTER COUNTY PUBLISHERS INC.

The prominent New York State newspapers, White Plains Reporter-Dispatch, New Rochelle Standard-Star, Yonkers Herald-Statesman, and others are all printed on presses equipped with Cutler-Hammer Drives and Control.

CUTLER-HAMMER PRESS DRIVES
CHOICE OF PRODUCTION MINDED MEN

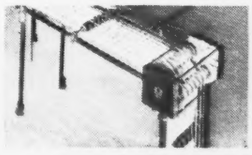
Men responsible for production in the publishing field want but one thing from their presses and equipment . . . *delivery* . . . of their newspaper or magazine with printing of highest quality, on schedule, regularly, dependably, efficiently, economically, profitably. That is why Cutler-Hammer Press Drive equipment has always been the major choice of such men in the past, why it is so popular today.

Cutler-Hammer Press Drive equipment constitutes the very ingredients of such regular, dependable, profitable press performance. Check the components of Cutler-Hammer Drives, the simple, dependable, trouble free a.c. motors used, the magnetic clutch which promotes new smooth acceleration and transition to main motor, the compact in-line drive assembly, the new multi-step cam-operated drum type control, the compact factory assembled and wired control cubicles. Features such as these and others make Cutler-Hammer Press Drives a sound investment for today and for the future and cause newspaper and magazine printers to continue to buy more Cutler-Hammer than any other press drives. CUTLER-HAMMER, Inc., 1460 St. Paul Avenue, Milwaukee 1, Wis.

Cutler-Hammer Cylinder Brakes

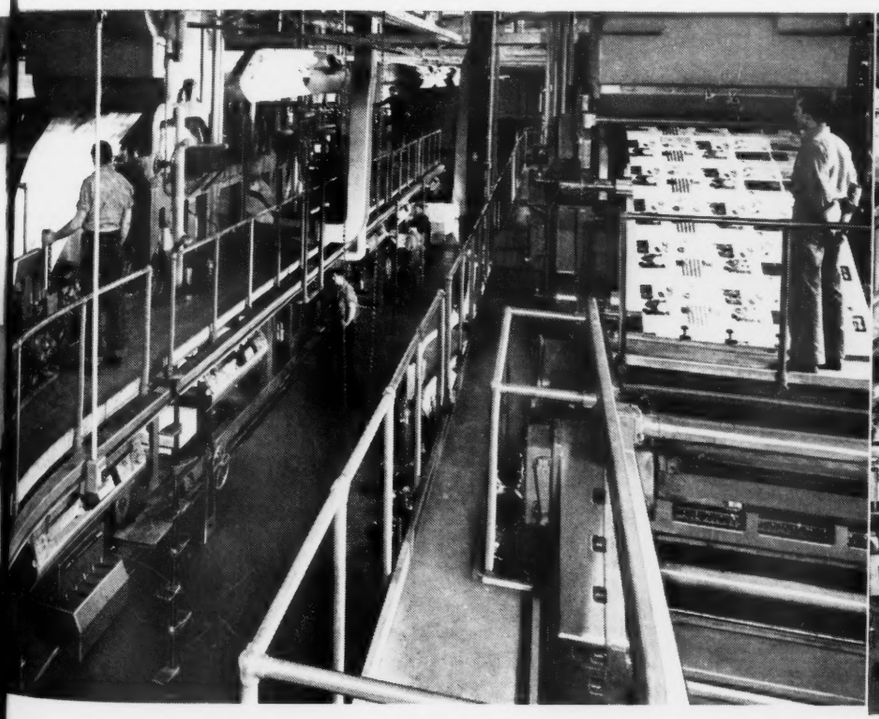
Stop presses almost instantly, safely, completely relieving gearing of excessive forces and harmful shocks. Each brake individually adjustable yet is automatically coordinated with other brakes.

Cutler-Hammer Newspaper Conveyors



Used in practically every conveyor-equipped plant in North America. Standard Duty handles up to 56 pages at any speed up to 60,000 IPH. Heavy Duty handles up to 96 pages at any speed up to 60,000 IPH.

CUTLER-HAMMER
PRESS DRIVES
C-H



30 MILLION MAGAZINES A MONTH

The C. T. Dearing Printing Co., Louisville, Ky., produces approximately 30,000,000 copies of a dozen or more leading magazines a month on two Cottrell 10-color presses and two Goss magazine presses shown here. These four presses represent $2 million worth of precision equipment. They are completely equipped with Cutler-Hammer Drives and Control.

Four darn good reasons

WHY YOU SHOULD INSTALL MATRIX SERVICE

Read 'em and Reap

1.

Publishers and printers now realize more than ever the added value of Matrix Contrast Service due to their greatly increased operating costs. The reduction of approximately one-third of all errors in linecasting machine operation means valuable minutes saved . . . and a yearly dollar saving far in excess of the moderate yearly charge for Matrix Contrast Service.

2.

With Matrix Contrast Service, typesetting machine errors stand out like a sore thumb . . . before the line is cast. Sharp, clear-cut Black & White reference marks have a visibility equivalent to 9 point type as compared to 3½ point for used untreated matrices. Matrix Contrast Service, therefore, reduces eye-fatigue, conserves energy and promotes increased production.

3.

Just as with Black and White Contrast, colors such as red, green, yellow and orange can be applied to old as well as new matrices . . . against the same jet black background. Matrix Contrast Colors aid operators in the detection of "wrong fonts" and insure the positive selection of matrices from "pi" stackers or trays.

4.

There's a Matrix Contrast Service Branch near you! With six service branches located in Boston, New York, Chicago, St. Louis, San Francisco and Los Angeles, we can process your matrices in Black and White and Colors now, and give immediate attention to processing all sorts and new matrices you purchase in the future.

There are many other reasons, too. Write today for latest facts on *savings for you* through use of Matrix Contrast Service . . . no obligation, of course. MATRIX CONTRAST CORPORATION, 154 West 14th St., New York 11, N. Y. — 326 W. Madison Street, Chicago 6, Ill. — 1105 Trenton Street, Los Angeles 15, Calif. — Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

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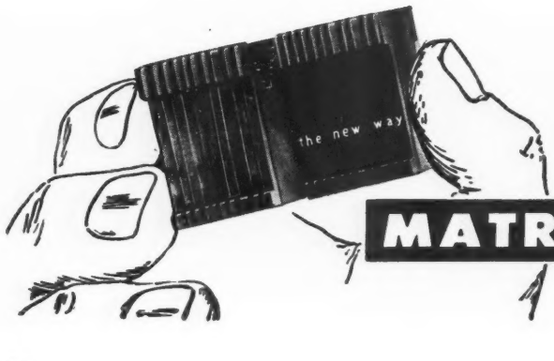


MATRIX CONTRAST SERVICE

PRINTING
EQUIPMENT
Engineer
October 1950

Exposition

with associated meetings is greatest Graphic Arts Industry event in last decade

By **STAFF WRITERS**

IT SEEMS remarkable that over 200 thousand people (including a goodly number of women and children) attended the National Graphic Arts Exposition in Chicago's Amphitheatre, September 11 to 23 inclusive. All of these people were connected in some way with the Graphic Arts industries. Please remember, also, that the general public was not invited to attend the Exposition, which makes the gross attendance all the more remarkable.

One stimulating thought was expressed by an Exposition official: "We have invited the wives, sweethearts and children of the men working in the printing industry so they will have a greater appreciation of the essentiality of the Graphic Arts in our daily lives."

Aside from the wonderment and failure to grasp the size of the Exposition upon the average person's first visit it developed that many printing executives found it necessary to remain for three days to investigate the different types of equipment in which they were interested. Even at that, a number departed for home because they couldn't stay away from their businesses for a longer period of time.

Manufacturers and suppliers all seemed well pleased with the substantial reaction of visitors. One company alone booked orders for 150 presses. One collator manufacturer sold 25 machines. A lot of the equipment in operation at the Exposition bore placards announcing sale of the equipment to different printing companies. A number of equipment companies stated they had booked sufficient orders to keep their factories busy for anywhere from three months to six months.

Personal Reactions Varied

Depending upon what a given executive was looking for at the Exposition, the reaction to the gigantic show was varied. Some executives, for instance, were delighted to find the presses of smaller size speeded up greatly, others felt that some of the old cylinder presses still are profitable to operate for certain classes of work. Still others felt that no basic advancement had been made in press development. All in all, however, press engineering seemed to have moved fast for the majority. In phototypesetting developments, executives immediately compared the film with hot metal composition in regard to present flexibility. All were agreed, however, that phototypesetting equipment is here and that it will gradually find its place in the industry. In general agreement were those interested in platemaking developments of all kinds.

Top Executive Pleased

Augustus E. Giegengack, President and General Mgr. of the Sixth Educational Graphic Arts Exposition, was quite happy with the successful conduct of the Exposition at its conclusion on Saturday, September 23. He said: "The equipment and demonstrations taking place at the Exposition will have a profound effect upon printing executives for the next several years. I appreciate the cooperation of all segments of the Graphic Arts and from leaders of the industry. Nothing as colossal as this Exposition could be staged by any one man or single organization. The stimulation received will carry the industry through any emergency."

Presenting a complete review of the Graphic Arts Exposition in one issue of *Printing Equipment Engineer* is an impossibility—so great was its magnitude. Future issues will be devoted to discussions of the equipment shown.

Russell H. Herrell, Administrative Assistant to the President, National Graphic Arts Expositions, Inc., during the closing hours of the Exposition, stated: "All Graphic Arts branches were represented. The Exposition management accomplished its major objective in assembling exhibits and bringing to Chicago the conventions which were held concurrently with the Exposition. It appears that all printing executives came to Chicago without a hangover and as a result took home with them ideas about modern printing technology. There wasn't a single person attending the Exposition but who felt amply compensated. The Exposition management estimated 200 thousand attendance and the actual attendance met that estimated figure. Every exhibitor who talked to the Exposition management said he did more business in one of the Exposition weeks than he expected to do in both weeks. Not a single person came to the Exposition management with a complaint. Only two exhibitors complained about exhibit charges."

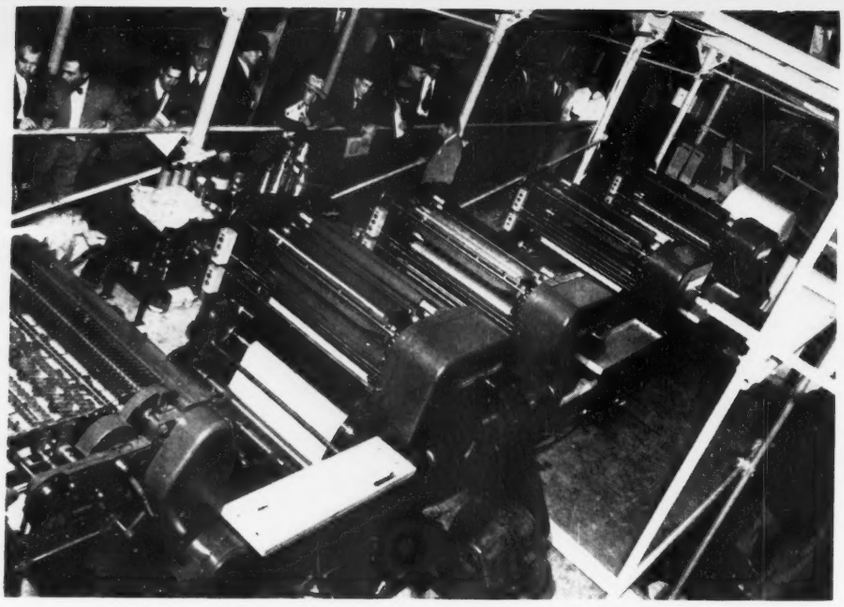
Both Messrs. Giegengack and Herrell stated the expenses of the Exposition will stay well within the estimated budget. At least two months will be required to settle Exposition affairs. The Intl. Assoc. of Printing House Craftsmen will benefit to the extent of 10% of the gross financial intake.

Dismantling Exhibits

Those printing executives who gave any thought to the problem of erecting some of the complicated equipment and getting the machines in operating condition in time for the Exposition opening deadline, may have wondered how the exhibitors managed to do so within the two weeks previous to the Exposition allotted by the Exposition management.

A. E. Giegengack, President and General Manager, National Graphic Arts Expositions, Inc., responding at convention banquet of the Printing Industry of America, Inc. at Palmer House Chicago, after having been awarded the honor of "Graphic Arts Man of the Year, 1950" He is holding the onyx desk set, decorated with the bust of Benjamin Franklin as a symbol of the A. F. Lewis Memorial Award. Was also presented with a Vacheron Constantin handmade wrist watch.

The nine judges who made the award and the organizations they represented are: Raymond L. Blattenberger, Printing Industry of America, Inc.; Edwin H. Evers, American Newspaper Publishers Assoc.; John G. Henderson, National Graphic Arts Education Assoc.; W. K. James, American Photoengravers Assoc.; J. Gus Liebenow, Intl. Printers Supply Salesmen's Guild; Harold L. McGirr, Intl. Typographic Composition Assoc.; Carlton Mellick, National Printing Equipment Assoc.; Frank Preucil, Technical Assoc. Lithographic Industry; and Fred E. Winsor, Graphic Arts Trade Assoc. Executives.

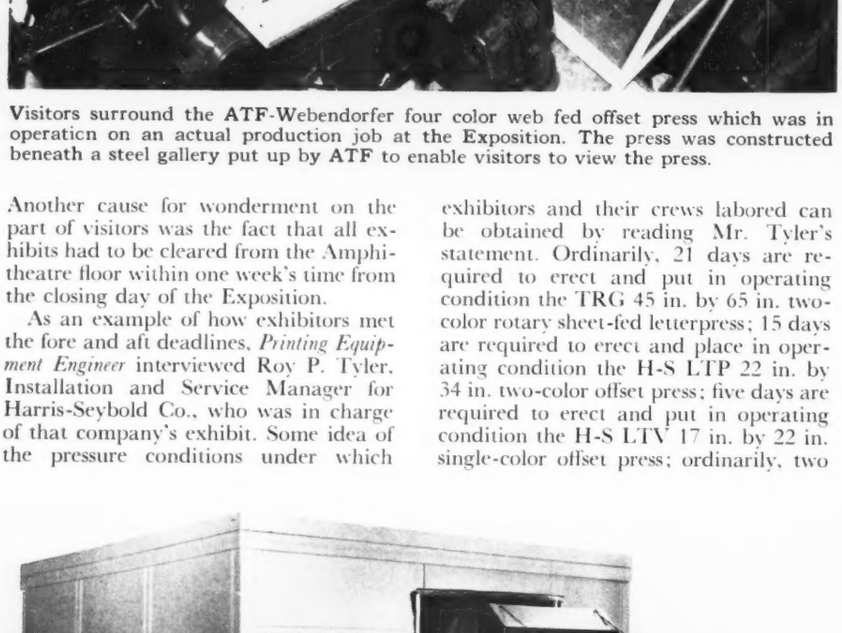


Visitors surround the ATF-Webendorfer four color web fed offset press which was in operation on an actual production job at the Exposition. The press was constructed beneath a steel gallery put up by ATF to enable visitors to view the press.

Another cause for wonderment on the part of visitors was the fact that all exhibits had to be cleared from the Amphitheatre floor within one week's time from the closing day of the Exposition.

As an example of how exhibitors met the fore and aft deadlines, *Printing Equipment Engineer* interviewed Roy P. Tyler, Installation and Service Manager for Harris-Seybold Co., who was in charge of that company's exhibit. Some idea of the pressure conditions under which exhibitors and their crews labored can be obtained by reading Mr. Tyler's statement. Ordinarily, 21 days are required to erect and put in operating condition the TRG 45 in. by 65 in. two-color rotary sheet-fed letterpress; 15 days are required to erect and place in operating condition the H-S LTP 22 in. by 34 in. two-color offset press; five days are required to erect and put in operating condition the H-S LTV 17 in. by 22 in. single-color offset press; ordinarily, two days are required to erect one of the Seybold Dynaclamp paper cutters, and from 1½ to 2 days for erecting and putting in operating condition the Seybold Collator.

Mr. Tyler stated that all of the above-mentioned machines were erected and running within eight days. In addition, he stated that all of them would be dismantled, packed and removed from the Amphitheatre in four days. These high-speed operations were performed by working three shifts around the clock.



Chemco Photoproducts Co., Inc.—The complete working exhibit of Chemco Photoproducts Co., Inc., featured, in addition to one of its darkroom cameras, a Model 1320 Flap-Jack Plate Whirler for photoengravers and a new all-metal pre-fabricated darkroom. The darkroom, such as is shown in the illustration is constructed of 20 ga. steel, with corner posts of 16, 18 and 14 ga. steel where required. Every panel is reenforced at 12 in. centers with spot welded ribs in horizontal position. Rock wool insulation is used both as a sound and a heat insulator. Sargent locks and Stanley hinges and door checks are used. The darkrooms are spray painted with a synthetic enamel (alkyd resin) baked on at high temperature. Paint is acid and alkali resistant. A wide variety of colors is available. Darkrooms can be constructed to any dimension and may be moved at any time to another location. Ventilating louvres are provided in the door and a ceiling ventilating fan can be installed. A slide window is provided for passing negatives to the stripper. The room is completely light-proof. Sink and storage facilities may be installed as desired.

Another featured equipment item, as mentioned above, was Chemco's Flap-Jack Plate Whirler, through the use of which it is claimed, 25% of enamel is conserved. Capacity is 38 in. The feature of the hot or cold enamel Whirler is that after the plate has been coated thoroughly through preliminary whirling, it can be inverted for the balance of the whirling operation. Inverting the plate by means of a hand-lever also turns on the gas burner bar and a whirling timer as well. The timer determines the length of time the plate whirls face down. The gas burner continues to whirl 40 sec. after the gas is turned off. The water ring is supplied to wash down excess solution.

Plant Executive Opinion

A number of management, production and mechanical executives have voiced their reaction to the Exposition since returning home. Some of these comments are as follows:

Thomas G. Roberts, Production Mgr., A. S. Gilman, Inc., letterpress-offset printers, Cleveland: "I was amazed and pleased with respect to the volume of printed matter distributed at the Exposition. Printing equipment manufacturers took their own medicine by using lots of it. Equipment on display at the Exposition has caused us to revalue equipment in our own shop since returning."

S. Toof Brown, President, S. C. Toof & Co., Memphis, Tenn.: "My five associates and myself who attended the Exposition in relays were amazed. In keeping with our established policy of providing our plant with the most efficient production tools, we not only placed orders during our visit, but have under consideration since our return further commitments as a result of what we saw in Chicago. The exhibitors really made our trip worthwhile."

Wm. Baumrucker, jr., Production Mgr., *Times-Herald*, Washington, D. C.: "Most encouraging and inspiring, because it showed fruits of real engineering design applied to printing problems. Let's see some of this equipment used on newspapers."

Edward T. Samuel, Proprietor, Edward T. Samuel Printers, Cleveland: "After three days of observation at the Graphic Arts Exposition, I can now more clearly visualize the trends in equipment that will affect my business."

R. J. Walker, General Mgr., Spencer-Walker Press, Inc., Columbus, O.: "Exposition came up to my expectations but showed urgent need for additional letterpress research if we are to compete with progress being made in offset."

Frank F. Pfeiffer, Vice President and General Mgr., The Reynolds & Reynolds Co., Dayton, O.: "Except for a very few new things, I was impressed by two—the mass of equipment and the pretty metal shields on last decade's presses."

W. D. Fleming, President-Treasurer, Birmingham (Ala.) Printing Co.: "The demonstrations of new equipment were mute evidence of the fact that a printer must keep apace of new methods if he is to survive."

Headlee Lee Howard, Printing-Lithographing, Tampa, Fla.: "My most encouraging impression was noting the development of new, smaller, high-speed labor-saving equipment, giving small shops a more favorable competitive place in the industry."

Charles B. Weimer, Manager, Printing Dept., The Clegg Co., San Antonio, Tex.: "Specialized equipment for specialized work . . . Plant engineering for maximum streamlined production . . . Accurate cost accounting . . . Highly skilled operating personnel—The Exposition showed me these are *musts*.

Equipment Maker Opinions

A number of equipment manufacturer executives interviewed by *Printing Equipment Engineer* gave varied opinions regarding the Exposition. In general, all Exhibitors were gratified both with the educational and sales reaction from people engaged in all branches of the Graphic Arts. Some comments are as follows:

J. E. Eddy, President, Miehle Printing Press & Mfg. Co., Chicago: "The Graphic Arts Exposition was very successful in presenting all types of equipment and supplies to printers from every part of the world. The management deserves much credit."

J. W. Kirkpatrick, Mgr. of Sales, Chandler & Price Co., Cleveland: "Large attendance, both owners and workers . . . Much interest in labor-saving machinery . . . Orders written, many more to follow . . . Exposition well worth expense and labor."

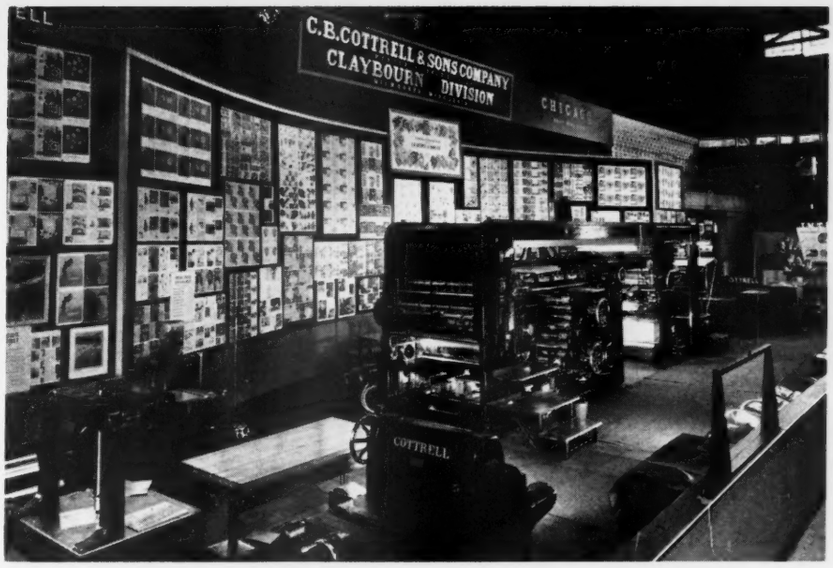
A. T. Mann, jr., Vice President, Intertype Corporation, Brooklyn: "The Graphic Arts Exposition, in my opinion, was a notable tribute to the printing industry which, from the standpoint of both quality and quantity of the equipment exhibited, may not be matched again for many years to come."

A. Saraceni, B. Verner & Co., New York: "It was a full-time job for my staff and myself . . . Orders taken at the show and orders coming in daily as a result of the show, will keep our plant at full production for the next 12 months or more."

Harry W. Porte, Vice President in Charge of Sales, Mergenthaler Linotype Co., Brooklyn: "This Exposition revealed a tremendous interest in new equipment that will enable printers and publishers to do a more productive job under today's cost conditions."

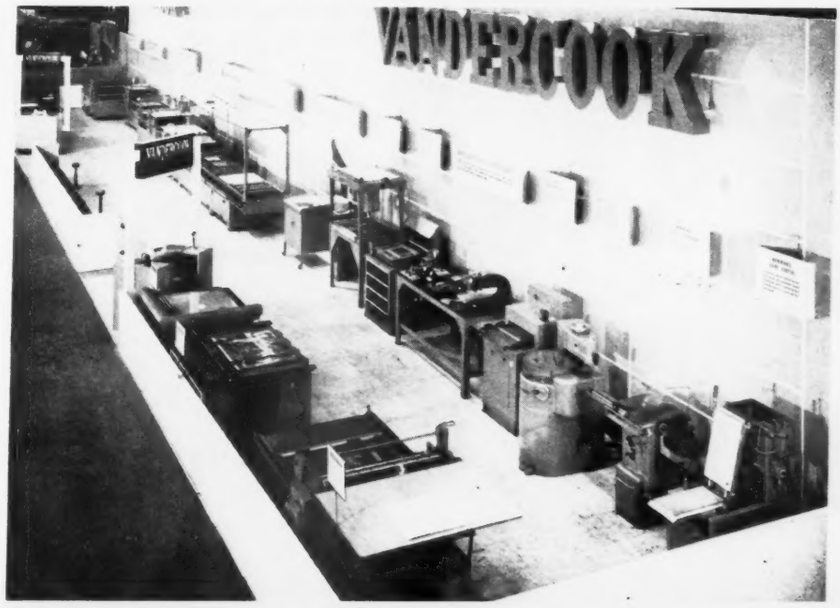
H. A. Porter, Vice President in Charge of Sales, Harris-Seybold Co., Cleveland: "It was gratifying to me to see so many press manufacturers actually printing successfully under admittedly difficult printing conditions."

Stig Cronstrom, Assistant to Vice President of Foreign Sales, American Type Founders, with offices in Stockholm, Sweden, stated: "I was highly impressed by the new methods introduced at the Exposition, such as those for color separation including the camera techniques and other photomechanical platemaking equipments."



Cottrell Rotary Letterpress—Unveiled at the Exposition by C. B. Cottrell and Sons Co. was a Two-Color Sheet Fed Rotary Letterpress. The new press was the center of the exhibit which displayed hundreds of printing samples from Cottrell presses. In addition, the company also demonstrated a number of Cottrell-Claybourn plate treating machines. Press samples in two colors from the 36 in. by 48 in. press were distributed as souvenirs. The press operated using plastic face plates with metal backing, being developed by the Claybourn Div. of the firm. The plates are designed to reduce makeready time. Features of the press include an automatic oiling system, anti-friction and roller bearings throughout, automatic ink roller throw-off, Dexter-Christensen pile feeder and delivery.

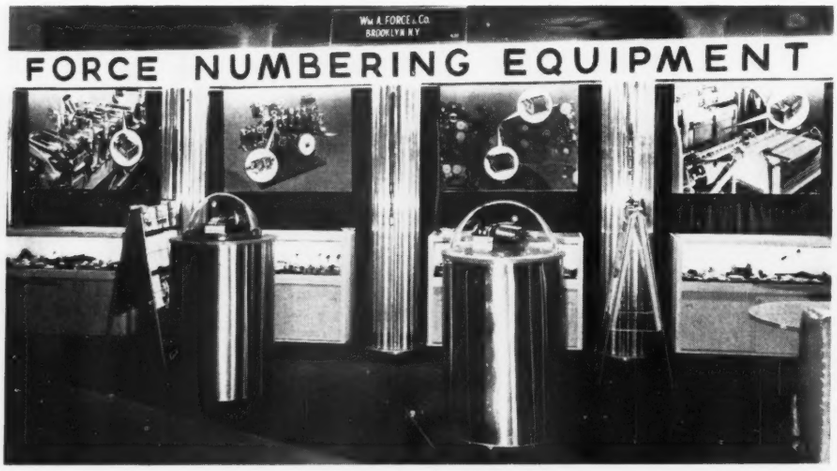
Rosback Demonstrates Auto-Stitcher—An automatic stitcher designed for the smaller plant and capable of handling any saddle stitching job in folded sizes from 2½ in. by 5 in. up to 10 in. by 14 in., consisting of any number of pages from two single 4-page sheets up to $^{3}/_{16}$ in. thickness ($^{3}/_{8}$ in. folded), was demonstrated at the F. P. Rosback Co. exhibit. Designated the Auto-Stitcher, the machine can be seen in the center foreground of the company's display. Representatives of the firm headed by J. C. Patterson, General Manager, also explained the Rosback 10-staple Gang Stitcher, which will place from one to ten stitches in a 26 in. pamphlet; the Vari-Speed Pony Rotary Perforator for round hole perforating; the Twenty-Two Rotary Perforator.



The Vandercook exhibit at the Exposition presented a typical pre-press department of a printing plant. Demonstrations were made on how forms can be made up to reduce makeready costs. Also shown, fast 4-color proof press.

Composing Room Equipment Displayed at Exposition—An impressive exhibit at the Graphic Arts Exposition was sponsored by Hamilton Mfg. Co. It included many recent composing room developments by Hamilton among which were the Line Composing Machine Operator's Cabinet, Galley Cabinets, Form Trucks, Imposing Table with overhead lighting fixture and Holding Frames. Pictured with the equipment in the above illustration are (from left to right): Ray C. Cook, Sales Director; Howard A. Nack, Sales Service Representative; and Roger L. Perry, Sales Representative, all of Hamilton's Printers Equipment Div.

Hammond Displays Saws and Stereo Equipment—Hammond Machinery Builders, Inc., displayed the company's line of composing room TrimOsaws and stereotype equipment. The following equipment was included: Full-Page Shaver, Full-Page Mat Scorcher, Radial Router, Stereotype Glider TrimOsaw, G-4 Glider TrimOsaw, Platemaker Glider TrimOsaw, Mercury and Ben Franklin TrimOsaws, Strip Material Cabinets, Router-Planer, EasyKaster 5 with EasyKaster Scorcher mounted on the melting pot, and an EasyKaster 6 and 8. The exhibit was in charge of A. T. VanderLinde, Printing Machinery Manager for Hammond.



Force Demonstrates Numbering Heads at High Speeds—Two demonstrator units can be seen in the foreground of the Wm. A. Force & Co. exhibit, which showed rotary numbering heads in operation at high speeds. The show cases in the rear contained a comprehensive display of the various types of Force Rotary Numbering Heads and Typographic Numbering Machines and accessories. W. A. Force III, President of the company, was in charge of the exhibit.

Exhibit Briefs

Immediately below and in the accompanying pictures we are presenting briefed descriptions of a number of exhibits. As is explained in a box accompanying this report, descriptions of the over 200 exhibits cannot be condensed into one issue. Future issues will carry descriptions of exhibitors.

Miehle Presses in Operation

Newest press demonstrated by Miehle Printing Press & Mfg. Co. at the Exposition was the No. 61 Sheet-fed Rotary Letterpress designed to print from curved electrotypes, plastic plates or stereotypes at speeds up to 6000 sheets per hr. The press is equipped with a Dexter stream feeder with pre-registering mechanism and unit construction whereby any number of units can be supplied for multicolor printing.

The Miehle exhibit also included Verticals, No. 29 Letterpresses, a No. 41 Single Color Flat Bed Letterpress, and a No. 61 Two Color Sheet Fed Offset Press. The three Verticals in operation included two V-50's and a V-36. The old V-36, bearing Serial No. 17, was brought back to show the comparison with the present V-50. Serial numbers on the latter two presses were No. 16999 and No. 17000.

Two of the No. 29 Letterpresses were stripped down to demonstrate the bed and drive motion, and printing strokes of the press. The various parts were painted in different colors and keyed to a chart beside the press. Several of the presses performed actual production work during the Show.

Orville Dutro & Son, Inc.

Orville Dutro & Son, Inc., operated and demonstrated the Speed-Flex Web Press and the Pearce Positive Gripper Action Automatic Collator. During a demonstration, the tachometer on the press indicated a running speed of 15,000 i.p.h., 8½ by 11 in. order form, two up, printing in black, blue and red ink from rubber plates; each form was numbered and perforated. The Pearce Automatic Collator is a gathering, gluing and cutting machine for the form, specialty and commercial printer. The six-station feeding machine is 11 ft. long, but with complete gluing, slitting and delivery unit is 20 ft. long. The Collator gathers, pastes and cuts 2, 3 and 4-on forms in any number of parts from two to 12 with or without carbon attached. In the event of a skip or double sheet, detectors stop the machine. The machine may also be used for gathering calendar pads, booklets, signatures, price lists, Christmas and greeting cards and for other gathering operations.

Ludlow Estimating Contest

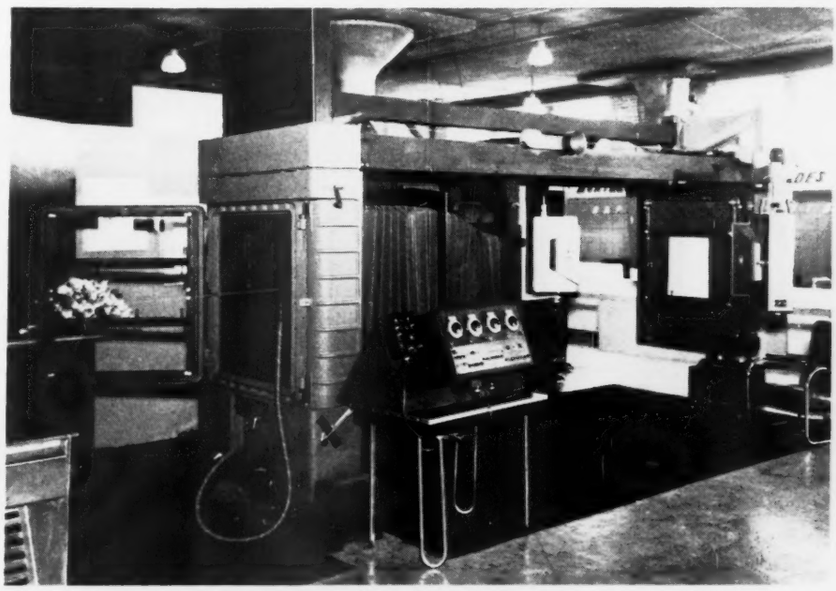
The Ludlow Typograph Co.'s display included five Ludlow machines with matrix cabinets, two Elrods running continuously on strip material, display cases containing numerous Ludlow-set jobs, and a wall panel listing the variety of Ludlow typefaces. Built in were a central office and enclosed sound-proof booths for private demonstrations.

An interesting feature was the public estimating contest held each evening in which a job was set and made up from reprint copy. Prizes were awarded for the estimate nearest the actual setting time, and that nearest the average time for the same job set in single type. The exhibit was in charge of John O. King, Vice President in Charge of Sales, assisted by Robert W. Buckley, Lawrence J. Helmick and R. Hunter Middleton.

Intertype Corporation

One of the displays exciting unusual interest was that of Intertype Corporation. On exhibit and being demonstrated were several new developments. One of these was the Model G text-display-mixer, a four main and four auxiliary magazine mixer assemblage which can be installed in a number of combinations of magazines. It is a versatile equipment. Intertype's photographic type composing mixer machine, the Fotosetter, was demonstrated through microphone. Also shown, for the first time, was Intertype's Desk Model Fotosetter which consists of the photographic mechanism of the parent machine. The "matrices" however, are assembled by hand in a composing stick, are processed automatically in the machine for film exposure, and the matrix line is then distributed by hand. Its product is the same as the original Fotosetter—a film, which after development, bears lines of composition, ready to be processed for platemaking purposes. The machine is intended for hand composition of display lines, headletter work, limited amounts of text composition and for setting corrections. One of the newer developments in connection with Fotosetter operation is a 24 pt. Spencerian script. The tails on the letters for word endings are carried on the space matrix and it appears all adjacent letters are jointless. Type faces available now are Baskerville, Futura and Garamond series. The latter series has been completed with roman, italic and small caps. Fotosetter equipment for correction and makeup operations was shown and demonstrated. This equipment consists of Line-Strip Punch, Vacuum Correction Box, Trimming Board and Vacuum Makeup Table. The method for insuring exact alignment of corrected lines with original composition and the alignment of display lines was explained. This is accomplished through register holes punched automatically in film or paper prior to the photographing operation. One of the unusual courtesies extended to other composing machine manufacturers was a series of private demonstrations of Fotosetter equipment held on different days during the Exposition.

Intertype Corporation exhibited and demonstrated photographic four magazine mixer machine, called the Fotosetter, Desk Model Fotosetter, and Model G Hot-Metal machine.



View of the R. R. Robertson Co. exhibit at the Graphic Arts Exposition. Introduction was made at the show of the Robertson 31 in. Color Precision Camera pictured here. Capacity of copyholder with glass cover and pressure type insert is 40 in. by 50 in. Also introduced was the Iritrol Diaphragm Control, shown on the table in front of the camera, a mechanical-electronic device which provides a completely controlled exposure, eliminating possible human errors. Main objective of the device is uniformity of camera operations irrespective of the human element. It is claimed to eliminate 50% to 75% remakes.

Concentrated Look-see—Characteristic of the thousands of printing management, production and mechanical executives visiting the Graphic Arts Exposition was the attitude they assumed in viewing the equipment, supplies and processes on display. Typical of this approach is the above group of visitors caught by a candid photographer during the explanation of the registering mechanism on the Harris 17 in. by 22 in. offset press on exhibit.

View of Mergenthaler Linotype Co.'s exhibit at the Graphic Arts Exposition. At extreme left there was a patio where visitors could rest. Next in line to the right was the first-time showing of MLCo.'s new Linofilm photographic line-composing machine. Next is shown the new Comet line-composing machine which produces 12 slugs per min. of 8 pt. 12 pica composition by automatic Teletypesetter operation with or without quadder. Machine may also be operated manually. Note the 70 deg. pitch of the two standard magazines as compared to the 37 deg. pitch of the Model 33 Extra Range Blue Streak Linotype at the right. First-time showing was also made of the MLCo. quadder attachment for application to outstanding line-composing machines.

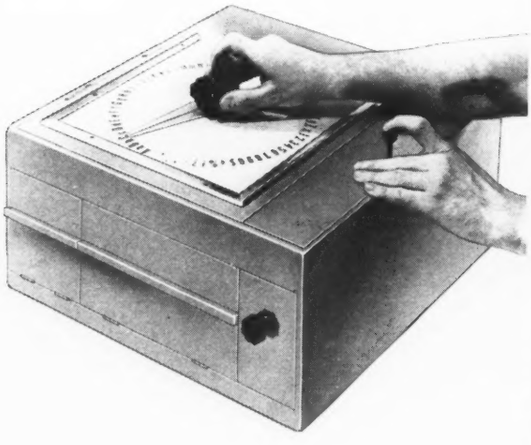
ATF Presses in Operation

American Type Founders had a variety of different presses in operation at the Graphic Arts Exposition and performed demonstrations on process cameras, photocompositor, platemaking equipment, and other items for the composing room, pressroom and bindery. Feature of the ATF display was the ATF-Webendorfer Four Color Web Fed Offset Press printing an actual production run of subscription cards for *Life* magazine. The press, already sold to Schultz Lithographing Co., Chicago, printed two color on the cards on two sides and was equipped for sheet delivery.

Also on display were four Mann sheet-fed offset presses, which included a 22 in. by 34 in. and 25 in. by 36 in. single color, a 30 in. by 40 in. two color, and a 38 in. by 53½ in. perfecting press. Other demonstrations were made on three ATF Chief offset presses, the Model 6 Little Giant, the Kelly Three and the Style C Kelly. The ATF-Hadego Photocompositor was in operation at the show also.

ATF reports that more than $1 million worth of equipment was sold by the company during the Exposition. Innovation of the exhibit was a steel gallery constructed to enable visitors to watch the operation of the four color web press and which also housed the ATF foundry type display.

ATF's printing plant layout engineering department was staffed with engineers performing their regular duties and advising printing plant executives on improvements in the layout of their own particular plant. The ATF Educational Dept. presented a scale model classroom.



Multi-Use Headliner—One of the novel devices shown at the Exposition was the Multi-Use Headliner Photocomposing Machine. The machine is manufactured by The Wirtz Co. and is distributed by Multi-Ad Services, Inc., 720 N. Jefferson St., Peoria, Ill. The device is employed for producing black type on white background or it may be used for producing white type (right-reading) type on black background. The product of the machine is a strip of photographic 35 mm. Resisto paper of the required length bearing the display composition lines ready to be pasted on the artwork.

The equipment consists of a box-like cabinet, 18 in by 18 in. sq. by 10 in. high. Two-hand operation is required in exposing each letter character singly and in sequence. Under the box lid is positioned a transparent plastic disk 13 in. diam. Between the plastic sections of the disk are mounted the letter characters or font of type bearing caps, lower case, figures and points. The characters are arranged in circular form. To expose the letter characters, the operator rotates the disk by means of the knob on the top of the box to register position. Swinging the pointer to the letter desired, the operator position sidewise it by means of a position finder which enters a slot radially cut in the transparent disk. The slots are cut into the disk in accordance with the set-width of each character. After the character has been positioned, the operator depresses a plunger to expose the letter character to the sensitized Resisto paper. As each character is located, the Resisto paper is moved an amount equal to its set-width. After the display line has been exposed a character at a time, it is removed from the box-like cabinet and is developed, fixed and rinsed similarly to a photographic print. From 30 to 40 characters per min. may be exposed. Letter spacing may be executed in multiples of 0.034 in. Spaces between words are made by using any letter character but without exposure. The sensitized paper is furnished in 100 ft. rolls.

At the time of the Exposition 13 type styles in 24, 36 and 48 pt. were available.

Robertson Diaphragm Control

Featured at the R. R. Robertson Co. exhibit was a Color Precision Camera and the Iritrol mechanical-electronic device for automatically selecting and controlling the lens diaphragm opening on any camera. Operations performed automatically by the device include line shots, screening operations, a one, two, three or four stop combination for halftone work using controlled stops for highlight, middletone, detail and automatic flash lamp or automatic flash curtain.

According to Consulting Engineer M. H. Sussin, the Iritrol is used for the control of processes commonly employed in reproduction photography. It is a completely selective system, there being 30-odd combinations, the operator selecting the operations desired. The selection of *f* stops in the diaphragm control are fully automatic and require no calculations by the camera operator.

All stages of exposure are under control of a light integrating device. For example, if the operator desires to make a four-stop halftone exposure which normally consists of highlight, middletone, detail and flash, he selects these operations on the control panel, sets reduction or enlargement on the lens panel and pushes the start button to start the automatic operation. The control will then automatically set up the proper *f* stops and expose in sequence until the desired procedure is finished.

Operations of the device include automatic flash lamp (electron controls) for length of exposure, and automatic flash curtain, which operation is selective from the control panel.

Expressing the function of the device in another way, it is fully selective to take care of differences in operation techniques, so the photographer will not be hampered by learning something all over. It is a pre-calculated system of controlling lens stops calibrated according to lens focal length and range of *f* stops, thereby providing an exposure system which requires no calibration or remembering by the operator.

Designated the Robertson Iritrol, all functions are selective by the operator, but once the device is set up and started, are performed automatically in a definite sequence without his aid. Basically, the control consists of a lens panel which holds the lens and a calibrated graph; a small drive motor and various mechanical linkages between it and the lens and associated graph; a movable carrier with scale where the operator sets his reduction or enlargements; a master control board whereby all operations may be

selected according to the requirements, and four light integrators; a photoelectric pick-up mounted on copyholder, and an automatic flash lamp and automatic flash curtain.

Also introduced at the Exposition was the Robertson 31 in. Color Precision Camera of overhead design. Copyholder of the camera is of cast construction with glass cover and pressure type insert accommodating up to 40 in. by 50 in. of copy. A 30 in. by 40 in. area is available on the camera for shooting transparencies by removing felt pad and insert.

Three-point composing or register bars cover the range of 5 in. by 7 in. to 28 in. by 34 in. Positive capacity of bars is from a 35 mm. Kodakchrome with a 2 in. by 2 in. cardboard mask up to 30 in. by 40. Entire unit of copy and positive holder oscillates through optical center, being controlled electrically from the darkroom.

Screen bars on the camera are adjustable and will carry a 36 in. rectangular or 34 in. circular screen, permitting color spearations up to 22 in. by 26 in. Screen mounting block assemblies are removable and interchangeable, permitting the use of individual mounting assemblies with every different screen. Sponsor states this feature eliminates resetting or wedging of screens when changing from one to another.

Darkroom controls for camera are recessed and mounted on rear case. Push-pull type crank with neutral position is used to adjust or set copyholder and lens carrier. Overhead arc lamp carriers are suspended independently from camera.

Vandercook Pre-Press Dept.

Feature of the exhibit of Vandercook & Sons, Inc. was a 5 T. four color high speed proof press designed to provide a four color proof within 3 sec. The machine is started, stopped and reversed by means of push buttons, while colored lights indicate which color or combination of colors is to print.

The pre-press department of the exhibit through Vandercook technicians demonstrated how press forms can be made up to reduce makeready costs and thus increase production. This part of the display introduced a base for mounting halftones and electrotypes called Sta-Bloc. The base can be made in any printing plant using a standard casting machine equipped with a special mold to give the finished cast a grooved face on which the plates are mounted. The base can be salvaged 100%.

Other equipment in the Vandercook space included a 42 in. power test press, a proof press claimed to hold hairline register at speeds up to 1800 i.p.h. and a max. sheet size of 26 in. by 28 in., an automatic inking and automatic dampening power offset proof press, and other smaller hand and power driven proof presses.

Harris-Seybold Co.

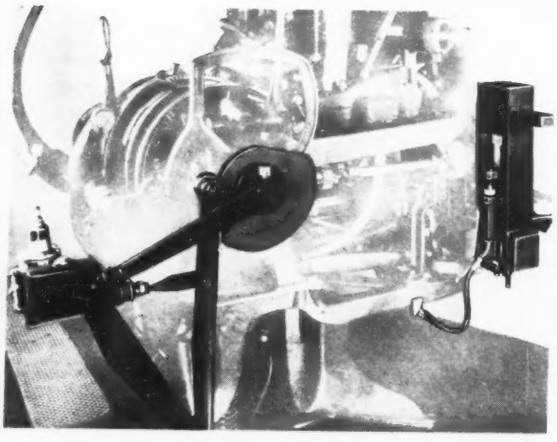
The Harris-Seybold display space was partially enclosed from the general floor area with photo murals for decorative purposes. In addition to the press equip-

Electrographic Processes—An impressive exhibit of press sheets from national magazines using the Electrographic processes were displayed by the various divisions of Electrograph Corporation. Demonstrations of making overlays, operating Bishop Treating Dies and the actual shaving of plates prior to printing from them were also performed. Facts and figures explaining why and how the new processes are time saving were also shown at the exhibit. Feature of the display was an explanation of the Bishop Pre-makeready Process for reducing hand makeready time by building varying surface levels into the electrotype.

Two Miller Presses Shown For First Time—The Miller 27 in. by 41 in. SY Single Color Press and the 27 in. by 41 in. TY Two-Color Press were shown to printers for the first time at the Exposition by Miller Printing Machinery Co. New features of the presses include heavier construction throughout, alloy iron beds and new inkers with lengthened stroke of vibrators. Other presses in operation at the Miller exhibit included the 19 in. by 25 in. SG Automatic, 21 in. by 28 in. SW Single Color and 21 in. by 28 in. TW Two-Color.

View of Part of Consolidated Display, in which were shown photomechanical platemaking equipments of various kinds, and first announcement of Koloroid Proofing Method.

Harris-Seybold Co. exhibited several new presses (offset and letterpress) and also showed prototype of Seybold Automatic Collator. Machine is not yet ready for formal announcement to trade.



Star Automatic Quadder —Visitors at Linotype Parts Co.'s exhibit saw the Model E Star Automatic Quadder in operation on a Model 5 Linotype. The Quadder is built both for Intertypes and Linotypes except 42 pica machines. It may be moved to another machine at any time. The main portion of the Star Quadder (at right in this illustration) which houses the rack and gear mechanism moving the vise jaws, remains the same as on the previous model, with refinements. The actuating slide on the Model E derives its movement from a separate cam operated in connection with a radically new hydraulic system. The separate cam is attached to the end of the main cam shaft and makes the Star Quadder independent of machine wear. Freedom from slap in the vise jaw movement is stated to be a characteristic because of the hydraulic method of moving the actuating slide. The train of racks and gears in the quadder housing is said to be the final link in the measured control of the vise jaws. An electro pump stop is said to act as a positive pump safety.

Operator's control buttons operate through flexible cables to push a pawl into engagement with the selected vertical rack or racks for all quadding operations. For left center quadding another button is mounted on the quadder case. When symchronized with the Mohr Saw, the three settings of vise jaws, assembler slide and the saw are obtained with one movement of the dial. An illustrated bulletin on the attachment is available.

Registerscope for Rotary Presses — Application of the Taylor Registerscope to rotary presses where the plate cylinder and the impression cylinder are of the same diameter, was explained at the Exposition by representatives of the Taylor Machine Co. The illustration shows the device being used to register plates on a three color, sheet-fed rotary press. In use, an outline copy of the form is first made up on a sheet of paper with proofs of the pages and/or illustrations pasted in the proper position. This guide sheet is fed into the press and stopped on the impression cylinder on which a form is to be made up. (This sheet is visible on the lower cylinder in the illustration.) The sheet is next attached firmly to the packing by Scotch tape and the gripper edge cut off. The Registerscope attachment is set in place on two pins in the press frame and the forward portion of the frame rests on the bearers of the impression cylinder. This enables the operator to see the image of the copy reflected clearly on the surface of the scanning plate. Illumination of copy and plates is provided by a rheostat. The device can be lifted from one set of cylinders and moved to another for making up successive colors.

ment mentioned elsewhere in this issue, the first showing of the Seybold Collator took place. The Collator is said to gather automatically all grades of paper and certain grades of carbon at speeds up to 6000 sets per hour. Max. sheet size is 17 in. by 22 in. Min. sheet size is 8½ in. by 11 in. The number of units which can be furnished with the machine is dependent upon customer's requirements. Power required to drive machine up to 10 units (sheets) is 1½ h.p.

In attendance at the Exposition were about 150 people associated with Harris-Seybold. Among them were Vice President Harry Porter, Vice President John Dabney, Vice President Guy Martin, General Manager Ren Perry, Canadian Vice President Hedley Prout, Coordinator Stuart Arnett, Installation and Service Mgr. Roy Tyler, Advertising Mgr. R. J. Niederhauser, Central District Mgr. John Morehouse, Cal Loefgren and Joseph McConnaughey.

Lanston Monotype Machine Co.

Lanston Monotype Machine Co. displayed type-casting and also photomechanical platemaking equipment. In the typecasting section a veritable type foundry was in operation. Featured was the 1517 Monotype Keyboard and Casting Machine. This equipment offers seven complete alphabets with roman and bold figures, points, ligatures, spaces, leaders and dashes at the command of the operator. The 1517 Composition Caster accommodates either the new 1517 extended matrix case with 255 character positions or the 1515 matrix case with 225 character positions. Also shown were the Monotype - Huebner Precision Color Camera, Vertical Register Device, M-H Universal Process (step and repeat) Machine, M-H Vertical Plate Coating Machine, M-H Precision Photo-composer, Monotype Mold and Matrix Cabinet, Monotype-Thompson Typecaster, and a Jones & Lamson Optical Comparator.

Consolidated Photo Engravers and Lithographers Equipment Co.

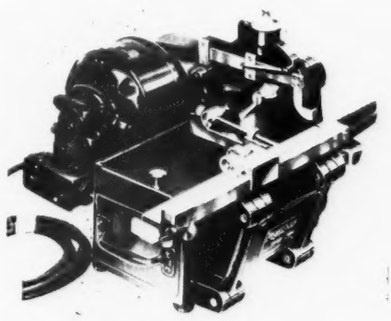
In addition to displaying its own equipment items, Consolidated Photo Engravers and Lithographers Equipment Co. announced the affiliation of Hammer Dry Plate & Film Co. (St. Louis). The company will be known as Consolidated Hammer Dry Plate & Film Co. Hammer produces dry plates, film and related products. One of the new products introduced by Consolidated-Hammer is the Koloroid Color Proofing Process. The process is for use in making a set of four-color process proofs from the separation negatives before printing on the metal plates, or the color retoucher can compare the result in producing a more accurately corrected negative or positive for the first proofing. It is claimed a set of four-color process proofs can be produced in less than an hour from the color separation negatives. Koloroid is a photographic sensitized ink pigment paper made in standard four-

color process inks for letterpress, lithography and gravure. It is a photographic transfer method, the cameraman printing the Koloroid pigment paper in vacuum contact with the separation negatives, producing after development an image which can be transferred to a Koloroid treated paper base.

Besides the above mentioned items, Consolidated also exhibited 31 in. Precision Color Camera, an 18 in. by 22 in. Process Darkroom Camera, a Stripping Table, Hydraulic Elevator Type Printing Frame, 36 in. Verticote for coating plates, Automatic Vacuum Printing Frame, a new all-metal darkroom and various other platemaking equipment. The darkroom is fabricated of porcelain enamel steel with turntable light trap, ruby overhead lamp, is said to cost less than tile or brick darkrooms and meets requirements of all building codes.

Mohr Lino-Saw Co.

In addition to displaying the Mohr Saw for attachment to line-composing machines, the Mohr Lino-Saw Co. exhibited its new Portable Mohr Saw. It is intended for sawing slugs and makeup material and for handling correction lines or similar matter in small takes in the composing room. Sponsor states that since it is used only for sawing slugs and



makeup material its blade stays sharp for a surprisingly long time. The Portable Mohr Saw is equipped with an automatic gripper. Capacity of machine is 60 picas with an extension to 120 picas. Accurate point settings are available. Manufacturer states that in the Portable Mohr Saw the same timmerless blade principle is employed as in its automatic saws for line-composing machines. May be placed on a makeup table, bench, material cabinet or near Ludlow equipment.

New IPI Ohio Branch

International Printing Ink has purchased from Ohio Boxboard Co. a large, industrial building in Rittman, O., to house new branch office and ink service facilities. Conversion of the building to ink making is scheduled for completion before January 1, 1951. The Rittman branch, which will replace the nearby Wadsworth Branch, will be under the direction of James Hocevar.

Commercial Controls Corp. Justowriter.—Recorder and Automatic Reproducer Machines were demonstrated. First typing is done on machine at right—second typing is done automatically on machine at left.

Commercial Controls Corp.

The Justowriter equipment consisting of two units—a Recorder and a Reproducer was formally announced at the Exposition. Basically, each is a proportional spacing, electrically powered machine with standard typewriter keyboard, both of which can be operated by a typist. The Recorder is operated just like any electric typewriter—the copy is typed in the regular way on a sheet of paper, but at the same time a narrow paper tape is coded with punched holes similar to the tape used in Teletypesetter machines. Retyping of the original typed matter is not required. Instead, when the end of the line is approached a light goes on. Any time the light is on, the justifying key may be pressed. Operation of this key records the proper justifying information in the tape and returns the carriage automatically.

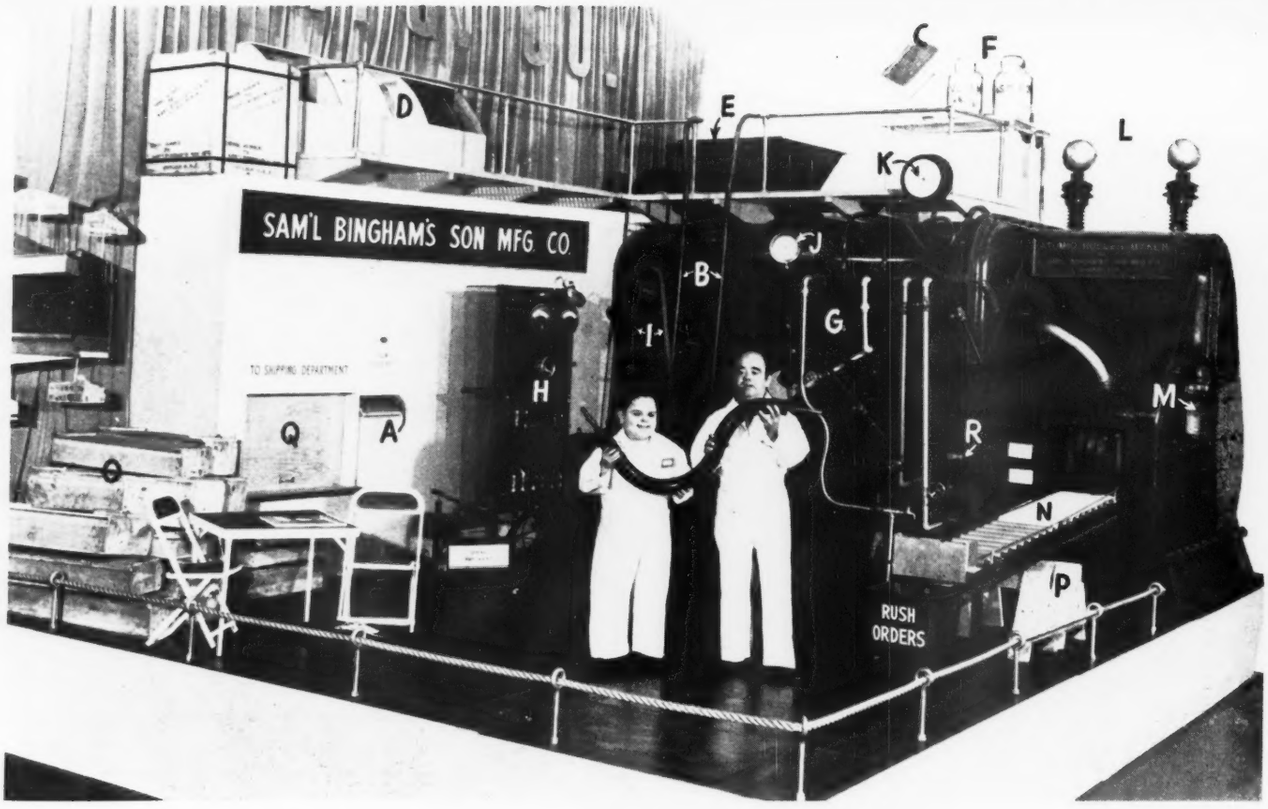
When any length of tape has been perforated, it can be removed from the Recorder and inserted in the second unit —the Reproducer. This second machine operates from the tape automatically and continuously. At the same time, it types evenly justified lines to predetermined measure. Typing on the Reproducer is accomplished at the rate of 15,000 ems per hr. (100 five letter words per min.).

The Justowriter may be equipped with any one of five type styles approx. 12 pt. in size. All are the same set size, but vary in weight and characteristics.

This equipment may be used for producing type matter for books, catalogs, manuals, newspapers, house organs and various types of office forms.

The type matter may be used for photo-offset composition, for direct plate composition and for preparing stencils.

Challenge Introduces New Cutters—The 370 Challenge Automatic Paper Cutter and the 265 Challenge Power Paper Cutter were among the equipment introduced by The Challenge Machinery Co. at the Exposition. Also shown were the latest models of the company's proof presses, paper drills, Hi-Speed quoins and Hi-Speed furniture. The 370 Cutter is equipped with a hydraulic clamp which rises 5 in. above the table and operated by a foot treadle.



Atomic Roller Maker Draws Chuckles

PROBABLY the greatest satire about the manufacture of press inking rollers ever concocted took place repetitively in the display space of Sam'l Bingham's Son Mfg. Co. during the recent National Graphic Arts Exposition, Chicago. The making of printers' inking rollers is a highly developed science. Probably this statement explains why the Atomic Roller Maker operated by two midgets for the Bingham firm drew many a chuckle from the public and from other roller-makers as well, at intervals of every three-quarters hour.

The Atomic Roller Maker, operated by a two-man crew of midgets, Paul Del Rio (at left above) and Bussy Dcarmo, (at right) "manufactured" a number of different kinds of rollers from such materials as old auto tire sections, old shoes, steel bale strapping, rags, corn cobs and aspirin tablets. A third man, concealed within the "machine" operated the sound effects, supplied the smoke emitted from hopper **E** as well as the intermittent light flashes coming from the hopper.

Following is a fairly comprehensive outline of the operation of the Atomic Roller Maker during one of the 5 min. acts:

The midgets are seated at the table placidly playing cards. A gong rings and three rush orders for rollers drop from chute **A**. The midgets continue playing cards for a while; finally, they stroll over to the order chute very much annoyed at the interruption.

Del Rio and Dcarmo scan the rush orders; the first one is crumpled and thrown into the waste basket; the second is folded and placed in a hip pocket; after looking over the third order, they decide to fill it.

Dcarmo now rapidly scales ladder **B**; he consults formulae book **C**; from bins **D** he assembles various materials such as auto tire sections, old shoes, rags, bale strapping and corn cobs; these he dumps into hopper **E**; Dcarmo then uncorks one of the bottles **F** and extracts either a giant vitamin or aspirin tablet; this is also dumped into hopper **E**.

Meanwhile, Del Rio on the floor below is busily turning a number of valve wheels cut in pipe lines **G** (turns 'em counter-clockwise or clockwise—doesn't make any difference) including the application of a 4 ft. long wrench to a stubborn valve stem, which upon being turned with the wrench emits a raucus sound.

At **R** is a movable indicator pointer which can be moved vertically over a number of indexed lines. The lines are as follows: Great Big Rollers, Little Tiny Rollers, Pleezall (out of order), Pleeza Phew, and Life Time (out of order). The pointer was left over the index "Pleeza Phew" most of the time.

Dcarmo now slides down ladder **B** in true fireman fashion. Del Rio goes over to switchboard **H**; while one double knife switch starts the motor (not visible in picture) Del Rio fusses industriously with the other switches, the rheostat, the ammeter and voltmeter. Motor sets belt **I** in motion and a continuous stream of sparks is emitted from motor commutator.

As Del Rio and Dcarmo fuss around with switchboard and further valve manipulation, smoke and light flashes are emitted from hopper **E**; hands on indicating dials **J** and **K** revolve continuously to build up required pressures; visible lightning-like energy flashes from pole to pole at **L**; Mr. and Mrs. Goldfish in glass tube **M** swim unconcernedly. The third man behind the scenes has been working the props with smoke producing material, electrical effects and phonograph records.

Finally, newly completed roller or rollers travel down conveyor **N**. In one variation, the midgets pick up platen press rollers from the conveyor, inspect them and each bites a chunk of material from the roller, chews and swallows the mouthful. (The rollers are covered with edible Knox gelatine and honey.) After looking over the rollers and making sure they taste right, the midgets pull out horses **P** and put on them one of the shipping boxes **O**. After securing the lid, the box is sent down the conveyor **Q** to shipping department.

The midgets now express satisfaction by dusting off their hands, shaking hands, and resume the card game.

People attending the show talked freely to Del Rio and Dcarmo. They like to mix.

It is understood the Atomic Roller Maker is the idea of Vice President Don Crews. He had the collaboration of Chief Maintenance Engineer Paul Fernekes under whose direction the Atomic Roller Maker was constructed, and Chemist G. L. Shoup who devised the edible roller covering, and President Carl G. Bingham.

It is reported the Atomic Roller Maker has been disposed of to be operated as an Atomic Foundry at a show devoted to another industry.

BOOKS
RECEIVED

Mechanism of the Linotype and Intertype

THE original text of the Mechanism of the Linotype by John S. Thompson which has been on the market for a long time has gone through many revisions. These revisions have been necessary to keep pace with the great number of changes in design and improvements in the machine from time to time. In fact, the present new fourteenth edition, *Mechanism of the Linotype and Intertype*, doesn't bear much similarity (except in principle) to any of the early editions. The revisors, Oscar R. Abel and Windsor A. Straw, Printing Dept., South Dakota State College, have now included parallel information concerning various models of the Intertype.

Besides making acknowledgment to the author of the original book, Messrs. Windsor and Straw extend their thanks to Intertype Corporation and Mergenthaler Linotype Co. for assistance in revising the new edition and in furnishing the many illustrations (of the latter there are about 200 in the new edition).

The authors state frankly that the book is intended for instruction purposes, and that with the addition of Intertype information together with laboratory projects after the chapters the book will work out very well in schools teaching the mechanism of the machines, as well as being a good book for the operator-machinist to have.

Printing Equipment Engineer feels that not only printing plant executives and machinists should have this book in their library, but should consult it from time to time. The reason is that the instruction books published by the respective manufacturers of the machines have been prepared from an engineering viewpoint. The book published by Messrs. Abel and Straw has been prepared really from an instruction standpoint entirely away from the manufacturer viewpoint. And we don't mean to infer that the manufacturers' engineering staffs are "holding out" anything from the user who actually isn't engineering-minded. The viewpoints of the two sources of information, however, are somewhat different. After all, the manufacturer does want his machines to perform so as to secure maximum production. His treatment of instructions deals with machines as they exist when new.

The text of this new edition has been prepared in not-too-technical language—in fact, as stated above, it has been prepared for instructional purposes. Discussed are the machine parts and their functions, adjustments of parts, and what to do when abnormal actions take place, and when mechanical troubles occur. The quiz questions at the end of each chapter are designed to cause the student to analyze machine actions and what to do when troubles occur.

Mechanism of the Linotype and Intertype—By Oscar R. Abel and Windsor A. Straw. Book consists of 334 pages, 200 illustrations; size approx. 4½ in. by 6½ in., semi-flexible binding, gold stamped. May be ordered through *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio. Price, $5.15 per copy postpaid, cash with order.

Type Metals
(Their Characteristics and Their Performance)

IN 6 in. by 9 in. size, Imperial Type Metal has published a revised edition of its former book *Type Metal Alloys*. The 58 page book has been prepared principally for the users of type metals. In the Foreword it is stated that it has been prepared also for the scientific investigator and students in printing schools.

There are nine chapters. The first deals with Type Metals in General. The others in succession are: Line Slug Metal, Stereotype Metal, Monotype Metal, Electrotype Metal, Vitalloy Metals, Care of Type Metals, Sampling, How to Keep Metal Fit. There are also two Appendices in which are discussed Melting Points of Chemical Elements, Densities, Linear Expansion and the answers to questions which arise in the plant.

The book is well illustrated. Care of metal in the plant, remelting operations, and other pertinent information about type metals are given. It is a practical and well written book for those handling type metals.

Joins Carnegie Faculty

Bror Zachrisson, Director of the Graphic Institute in Stockholm, Sweden, has joined the faculty of the Printing Management Dept. of Carnegie Institute of Technology as Visiting Professor of Graphic Arts Education. Prof. Zachrisson will teach Production Methods and Book Typography for the 1950-51 academic year. He is a 1928 graduate of Carnegie and holds a B.S. degree in Printing Management.

RIT Installation

Dr. Mark Ellingson, President, Rochester Institute of Technology, reports a set of Microtronics Color Separation Turret Lights has been installed in the camera section of the lithographic department. The installation was made with the cooperation and supervision of George A. Cameron, jr., Vice President of Microtronics Corporation.

SKF Campaign

An educational campaign designed to enable its industrial distributors to extend their range of service to customers as anti-friction bearing specialists has been inaugurated by SKF Industries, Inc. According to Richard H. DeMott, SKF Vice President, the program will provide distributors with technical advice to aid in solving bearing problems. The program is in charge of D. W. McAllen, Manager of SKF's Branch and Distributor Dept.

Trade School Equipment

Installation of a set of Microtronics Color Separation Turret Lights in the camera section of the lithographic department at the New York Trade School, has been announced by George E. McLaughlin, Supt. of the school. The installation was made with the cooperation of George A. Cameron, jr., Vice President of Microtronics Corporation.

Conference Heads Discuss Past Meetings—An informal shot of Joseph J. Cory (left), Chief Composing Room Machinist, St. Paul (Minn.) *Dispatch* and *Pioneer Press*, and W. R. (Bill) Coddington, Composing Room Supt., Youngstown (O.) *Vindicator*, taken at a recent newspaper mechanical conference. Cory was president of the Northwest Newspaper Mechanical Conference last year, while Coddington held the same office in the Great Lakes group during the 1949-50 year. They seem to be extolling the relative merits of the two meetings. The 1951 Great Lakes Conference will be held at Hotel Oliver, South Bend, Ind., January 7, 8 and 9. The Northwest meeting in 1951 is scheduled for the Radisson Hotel, Minneapolis, Minn., February 10, 11 and 12.

The Future of Letterpress

(Abstract of address delivered by Joseph Chanko, General Manager, Conde Nast, Greenwich, Conn., before the Annual Convention of the International Assoc. of Printing House Craftsmen, Chicago, September 1950.)

THE letterpress field is the largest of the three methods of printing commonly in use. The enormous investment represented in letterpress and the fact that expansion programs of the past five years have involved large sums for letterpress, indicates the continuing importance of this field. Sound competition from other processes is welcomed, for the competition acts as a challenge. Offset and gravure both have their places in the industry.

It was predicted a few years ago that letterpress was on the way out, but because of the progressive attitude assumed by the letterpress field, it still is a very lively process. However, it is the general opinion that the rate of progress in the process is unsatisfactory.

The future of letterpress depends to a great extent upon the superintendents, foremen and manager in the industry. Unless these men exercise the necessary initiative letterpress progress will continue to be slow. They are the ones who must inspire, guide, encourage and dare to experiment. They cannot expect outsiders to do very much and they cannot sit back and complain that machinery manufacturers and inventors are not supplying improved equipment.

The production and mechanical executive may say, "How can I find time to devote myself to thinking about progress when I am so busy all day long with everyday operating problems?" Perhaps the answer to that is to see what can be done to free the supervisor from the drudgery of detail by having a clerk to take over routine work.

The future of letterpress depends upon the following factors: Improved methods; established standards; research and engineering; improved machinery, and better material.

Improved Methods

An open-minded superintendent can accomplish a great deal if he becomes aware of red tape which may exist in his plant or questions the methods which perhaps may have become outdated. It may take a long time to inculcate the proper attitude toward improvements in all those who, for so many years, have performed tasks differently. Foresight, patience and faith are required in order to work out these improvements. The very fact that the supervisor of a department, or his assistant, attempts to improve methods should act as a source of inspiration to all the people under him, provided, of course, the objective is explained intelligently in advance.

One of the first things to be investigated is whether the job is properly engineered. Does the production department think the job through and issue the necessary instructions clearly, or is it left to chance and consequent delay? Does the plant have proper production controls? Is copy received in good shape and is it properly marked before going into production?

Another question to be asked in composition is, are there too many errors due to poor typesetting and unsatisfactory proofreading necessitating costly press delays? In electrotyping, are electros made so accurately as to require an absolute minimum of makeready? Can pre-makeready be used which is built into the plate? Is clean Vinylite used for molding instead of dirty wax molding?

In presswork, have avoidable delays been reduced to an absolute minimum? Is it more economical to run combination forms? Is the best color rotation in four-color process work being used? In binding, are the operations given sufficient thought in advance in order to avoid last minute problems?

Establish Standards

Standard data, standards of operation, minimum standards of performance, standards of quality can be established in every department. All standards should be codified for ready reference and made available to those in a plant who need them.

Recently the Intl. Assoc. of Electrotypers and Stereotypers issued a manual entitled *Basic Requirements for Electrotypes* which is designed for establishing definite standards for good electrotypes. The Printing Industry of America, Inc., has also issued the book *Photoengraving Specifications Manual*. It is devoted entirely to letterpress and contains a set of standard specifications designed to improve quality and save time in photoengravings. The manual covers engraving specifications and recommendations, and standard process colors worked out by the Natl. Assoc. of Ink Makers and tested by a PIA committee.

More printers are using transparent or semi-opaque yellow instead of traditional opaque yellow because results are better. Engravers who etch their plates to conform to the standard colors and proof their progressives in those colors with a normal quantity of ink, will make it possible for the printer to produce better work at no additional cost.

There is a great lack of engineering approach in the printing industry. The industry should have text books for training, hand books for reference and reliable method books. There is not enough of this kind of information. It would be desirable to issue a book on standard color other than process, to indicate the colors commonly used in the industry and to supply definite numbers for these colors so they may be designated anywhere for ready use on a press.

Research and Engineering

The bigger companies in the letterpress field should invest much more money in research than they now do, and while it is true that they would get the first benefits from any research program, everyone in the industry would ultimately benefit by it. The future of letterpress will also depend upon the amount of time we are willing to spend on experimentation and on testing the latest developments in the industry.

More than 200 different projects have been listed by the Graphic Arts Research

(Continued on Page 92)

Chanko Addresses Letterpress Clinic — Surreptitiously, Intl. President Russell J. Hogan reaches for his glasses as Joseph Chanko discourses during the letterpress clinic of the Intl. Craftsmen's convention.

Craftsmen *Hold high tension convention in connection with Graphic Arts Exposition at Chicago*

By **STAFF WRITERS**

CRAFTSMEN and their ladies to the number of 1404 attended the 31st annual convention of the International Association of Printing House Craftsmen. The convention was held at Hotel Stevens, Chicago, September 10 to 13. All previous convention registrations were broken. The largest previous convention was held in Cleveland in 1937 when 1060 Craftsmen and their ladies registered.

It was freely acknowledged that the Sixth Educational Graphic Arts Exposition was responsible for the large attendance. Another pleasing feature was that approx. 260 Canadian Craftsmen and their ladies attended.

According to Executive Secretary Pearl E. Oldt's report to the convention, membership in the Association was in the ascendancy in the fiscal year. There are now over 12 thousand members in the 87 local clubs in the jurisdiction. Total net membership gain for the year was 807.

Roy J. Kirby, President of the Chicago host club, formally opened the convention on Sunday night, September 10. Gradie Oakes, Immediate Past International President, was General Convention Chairman. Having a membership exceeding 800, the Chicago Club has sufficient talent available from which to draw to put over a large convention efficiently. Mrs. Don (Martha) Crews was Chairman of the Ladies' Committee. She was assisted by Mrs. Jack L. Hagen and the wives of Chicago Craftsmen in providing an entertainment program for the 500-odd ladies who attended.

Public Printer Speaks

Speaking on *Printing and the National Economy*, Hon. John J. Deviny, Public Printer of the United States, called upon all Craftsmen to take stock of the resources in the printing industry. Mr. Deviny was the opening speaker on the Printing Horizons Program held on Monday morning Sept. 11, at the Stock Yards Inn.

Deviny said that in an emergency we not only need to step up production of materially normally required in limited quantities, but we also need to increase all activities upon which production is dependent. That means printing, he added, for we could no more run our national economy without printing than you could produce steel without ore.

In the last decade, which included nearly four years of wartime conditions, with a post-war period of relative scarcity, the printing industry has increased and improved its facilities, methods, plants and workers. It stands today, he said, in the best condition it has ever known, ready to do its part in the emergency. Its annual output has increased in value from $2¼ billion to nearly $4 billion.

Inspirational Address

A Challenge To Craftsmen was the title of the Address delivered on the Printing Horizons program by Lester S. Crowl, President of The Blade Printing and Paper Co. and the Blaco Advertising Agency, Toledo, O. Crowl's challenge was for Craftsmen to weigh the quality and cost of the things which you can accomplish with their craftsmanship, individually and collectively, as compared with the quality and cost of the work being done by similar organizations in the printing market.

He also told Craftsmen to think in terms of production quality and costs in their organization as against the substitute processes which are being developed and which are already or soon will be available in the printing market.

Rewards of craftsmanship, said Crowl, are satisfactions that come from a feeling of self sufficiency, the realization that something must be created before there can be any compensation for it, of creating something, and of contributing something to education.

New developments are beginning to threaten the established craftsmanship in the printing industry, he continued. From the standpoint of typesetting, "a tremendous volume has been lost during the past years to the Varitype machine and electric typewriters in general for reproduction by the planograph or offset process. This is not because the new process is any better, but because that particular process is more reasonable or cheaper than the same end accomplished by setting type.

"We are also being informed of new processes of color printing," said Crowl, "which vary considerably from our ordinary four color process method in letterpress or offset. Some of this work is being accomplished by a gelatine base sensitized photographically. Where we use the think of gelatine printing relative to small runs, there is a method where the gelatine is being hardened and production is going on to moderate length runs. Here again is a process being offered at a price that is considerably less than that which we have been able to offer by the established and well-known methods in our industry.

"If that process becomes successful, it means quite a lot from a competitive standpoint to you men in the engraving industry, and you who are experts in running color work on presses."

Herrell's Guidance Speech

Russell H. Herrell, Assistant to the President, National Graphic Arts Expositions, Inc., followed on the program

Installation of 1950-51 Craftsmen Officers—Impressive ceremonies by John J. Deviny (at microphone), Public Printer of the United States and Intl. Past President, marked the installation of new officers at the annual banquet of the Intl. Assoc. of Printing House Craftsmen. The new officers are pictured above from left to right as follows: Albert L. Kolb, Treasurer, Buffalo, N. Y.; Howard N. King, Third Vice President, York, Pa.; Gordon J. Holmquist, Second Vice President, Los Angeles; J. Homer Winkler, First Vice President, Columbus, O.; and Fred C. Baillie, President, Ottawa, Can. Outgoing President Russell J. Hogan, Orange, Conn., is seated in the picture behind the floral table piece.

with a talk entitled *What Do You Want To See At the Show?* Herrell said that the one controlling, driving objective back of the two and a half years of work that has been devoted to the preparation of the Exposition has been the welfare of the industry as a whole.

The exhibitors, he said, realized that their welfare, security and progress are inseparably tied up with the welfare, security and progress of the men in the printing industry. They spared no effort or expense in promoting these mutual interests."

Herrell revealed that over 2500 people had been assembled to explain and demonstrate the various items and procedures at the Exposition. He added that it would cost the exhibitors, in the aggregate, at least another $2 million to stage the mammoth show for two weeks. The high cost of Graphic Arts expositions is one reason, the speaker stated, why the industry cannot afford to hold a show of this type more often than about once in 10 years.

Offset Clinic

THOMAS P. Mahoney, Plant Mgr. for Regensteiner Corporation, Chicago, presided at the Offset Clinic on Tuesday, Sept. 12 at Hotel Stevens. The panel consisted of the following Printing Developments, Inc., personnel: Wm. H. Webber, President; Thoburn A. Dadisman, Vice President; Chas. G. Barkley, Sales Mgr.; Chas F. Geese, Special Consultant, and Vincent C. Hall, Research Consultant of Time, Inc. Members of the Production Panel immediately following were: Michael H. Bruno of Lithographic Technical Foundation; G. L. Erikson, Vice President, Braden-Sutphin Ink Co.; Dr. Robert Reed of Lithographic Technical Foundation, and Frank Preucil, Director of Research, Chicago Rotoprint Co.

Mr. Webber, at the outset, stated that Time, Inc. does not produce its own printing. The reasons for sponsoring research are that it wants to increase the circulations of its magazines by doing better editing and faster, better and more economical printing. Better printing, faster and lower cost printing means more printing.

In addressing the audience on Time's Lithure offset printing plate, Mr. Geese asserted that out of more than 2500 plates which have been made not one has been lost except through human error or accident. "One of our plates," said he, "was well into its 6 millionth impression on a metal decorating press, still carrying color as well as it was in its 10 thousandth impression, when a piece of metal wrapped around the cylinder and tore a hole in it."

The speaker stated that "In the Springdale Lithure process we have developed a plate surface capable of producing tonal values up to 300 line screen without distortion. The water-receiving surface has a natural affinity for moisture. Because of the hard chromium surface, plate wear is practically impossible, for two reasons: (1) The copper image lies below the chromium surface and receives no friction from rollers and rubber blanket. The top surface or moisture-carrying surface is a hard, porous chromium . . . It is now possible to reproduce a finished product with an 18 range tonal value as against 9 in ordinary deep etch."

Advantages enumerated by Mr. Geese are as follows: (1) No plate makeovers; (2) Elimination of press downtime due to faulty plates; (3) Makes it possible to run the press faster continuously; (4) Ink savings up to 20%; (5) No loss of plates due to oxidation while hanging in the reprint racks; (6) Old printing surface may be stripped off and plate may be rechromed.

Vincent C. Hall, Consultant to Research and Development of Time Inc.'s Springdale (Conn.) Laboratories, discussed the engineering aspects of electronic color correction in connection with the use of Time's electronic color scanner.

Mr. Hall explained that practical considerations led to the design of the scanner to make 250 lines to the inch separations, adequate for enlargement up to 1½ times for letterpress reproduction with 120 line screen. In this way, the negatives can be handled in the same manner that conventionally made separations are handled from the time they are taken off the machine to the final reproduction . . . Retouching or masking is unnecessary either in the negative or continuous tone positive step. Since the negatives are uniform in density range, camera technique in the making of halftones can be standardized to a considerable extent. In the etching step it is possible to carry the flat etch down to printing depth and to then pull a flat proof which is close enough to the desired reproduction to indicate accurately what further steps may be necessary to finish the job.

A modification of the scanner, explained Mr. Hall, allows scanning at 500 lines to the inch, which makes it possible to enlarge up to 3:1 without appreciable loss in detail for 120 line screening so that a 4 in. by 5 in. transparency can be scanned and made into a full *Life* size page, about 11 in. by 14 in. Time required for turning out a set of separation negatives is 1 hr. 5 min. at 250 lines per in. and 2 hr. 10 min. for 500 lines to the inch, starting with an 8 in. by 10 in. transparency.

Among other remarks Charles G. Barkley said that . . . "In addition to the improvements within the phase of color separation itself, quality improvement should result—and in our experience it does result—from the fact that the engraver can more effectively devote his time and craftsmanship toward improved quality of engravings and plates rather than in the frustrating process of correcting for an inadequate set of color separations. He also asserted that "of extreme interest to pressmen is the fact that press plates made from scanned separations require considerably less makeready time on the presses.

Mr. Barkley's closing note took the form of a warning to the effect that: "It should be clearly understood that the Springdale color scanner at its present level of development is not perfect in its execution of the color separation job, and it will only be possible to attain its potential degree of perfection by the closest possible cooperation between the users of the product and its designers."

Questions and Answers

During the question and answer period following the major addresses, a number of questions were answered. One

A Few of Over 1400 Craftsmen are Pictured in Left to Right Order as They Gathered in Chicago for the 31st Annual Convention.

1.—William Yeager, President, Erie (Pa.) Club and Superintendent, The Dispatch Printing Co.; L. G. McClellan, Richmond (Va.) Club; Stuart Braznell, The Braznell Co., St. Louis.

2.—Robert Knox, Michigan Typesetting Co., Detroit; Roy Knipschild, Roy Knipschild & Co., Chicago; DeWitt A. Patterson, Plant Supt., Color Engravers Div., Alco Gravure, Chicago.

3.—Robert M. Edgar, President, Neyhart Printing Co., Pittsburg; M. F. McGrew, Layout, Wm. G. Johnston Co., Pittsburgh; Alfred L. Bellotti, Manager, McLean Brothers, Ltd., Montreal, Can.; P. E. Pepler, Superintendent, Southam Press, Montreal.

4.—Dr. R. Hunter Middleton, Typographic Director, Ludlow Typograph Co.; G. H. Petty, Vice President, and Stephen F. Hopkins, Second Vice President, Weimer Typesetting Co., Indianapolis, Ind.

5.—Fifth District Conference Breakfast. Alvin Friedrich, Fifth District Representative, Indianapolis; Russell J. Hogan, Intl. Past President, New York; Leonard Verseput, Grand Rapids, Mich.; Guy Lambert, Indianapolis; Frederick H. Lutz, Louisville, Ky.; Ted Jarosik, Detroit.

6.—Richard N. McArthur, Higgins-McArthur Co., Atlanta, Ga.; Walter Zahn, Zahn Typesetting Co., Milwaukee; Percy Champion, Composing Room Foreman, Millprint, Inc., Milwaukee.

7.—Fifth District Conference Breakfast. John Leech, Indianapolis; J. H. Clendenin, Indianapolis; G. B. Nordstrom, Indianapolis; John Frisbie, Toledo, O.; S. F. Hopkins, Indianapolis; Guy Bradley, Indianapolis; Avery Schlageck, Toledo, O.; Henry Boes, Toledo, O.

8.—Russell H. Herrell, Assistant to the President, National Graphic Arts Expositions, Inc., speaking on the Printing Horizons program.

9.—William L. Mills, Type Supt., American Bank Note Co., Chicago; Louis H. Klug, E. F. Schmidt Co., Milwaukee; L. B. George, Production Mgr., Trade Press Typographers, Milwaukee.

10.—Paul F. Osborn, York (Pa.) Club; E. Hawley Twiss, Lehigh Valley (Pa.) Club; Ivan E. Bixler, Allentown (Pa.) Club.

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Caucus Meeting Officers, International Association of Printing House Craftsmen, Stevens Hotel, Chicago, Tuesday Night, 11 O'clock, September 12.

Rather than hold nominating and election contests for International officers on the convention floor, it is customary for the Intl. Assoc. of Printing House Craftsmen to hold what is called a "Nominating Committee" meeting on Tuesday night preceding the last day of the convention. This procedure permits peace and harmony to prevail on the convention floor the next day and expedites transaction of convention business. At the Nominating Committee meeting, the voting delegate from each club represented (each club has one vote) expresses his choice for a candidate by secret ballot. After decisions have been made as to who will be selected for International office, the election of officers at next day's convention session is merely a matter of form. This year's Nominating Committee meeting engendered no animosities and the meeting was adjourned after a few spirited speeches.

In the accompanying illustration A are shown (left to right): Tellers—Frank Voelkl, Press Supt., Standard Register Co., Dayton, O.; George Sawyer, Toronto (Ont.) Can., Club; Pearl E. Oldt, Executive Secretary, Intl.Assoc. Printing House Craftsmen, Cincinnati.

In panel B at the right is Nominating Committee Chairman, Basil Parsons, who is Secretary of the Thomson National Press Co. The next night, at the Association banquet, Intl. President Bailey announced appointment of Parsons as Intl. Representative-at-Large.

The reason for the head gear on Parsons' bald pate is that he was decorated by his fellow Craftsmen from the New England states after ex-Intl. President Gordon Ruiter extended an invitation to hold next year's convention in Boston. The invitation was accepted unanimously amid noisy demonstration of about 30 New England Craftsmen (all decorated with fuss and feathers) who paraded to the speakers' platform, emitting alleged Indian calls.

of these was: "Is it possible to reverse procedure of making a set of color separation negatives on the Time Scanner to produce a color original—that is, start with a set of four-color negatives and by reversing the procedure produce an original?" The answer was yes, it is entirely possible. Some experimental work has been done along this line with good results.

Some one asked: "What is the cost of the Scanner?" The Scanner will be leased—not sold. A payment of $5 thousand down with a contract for three years, balance $19.5 thousand or thereabouts, per year, totaling $65 thousand. There will be a production schedule of about 325 production hours per quarter.

Some one observed it would seem that a large volume of work would be necessary to operate the instrument properly. The reply was that a large volume would be required but trade work would bring in additional revenue.

When asked how the cost compares with the conventional procedure, the reply was that the cost is dependent upon what we consider the conventional procedure. Many different factors will change the conventional procedure such as shop practices, types of work, etc. With these factors about equal, the cost of producing color corrected negatives on the Scanner, with a large volume of work, will be lower.

A Cleveland engraver wanted to know if negatives or positives are used with the Lithure plates. Positives, principally, are used, but negatives may also be used.

In connection with the Lithure plate, it would seem that with the printing image below the surface metal that the plate prints intaglio. That is correct. We have given the plate a composite name: "Lithure" for lithogravure.

When asked if the Lithure plate requires a special ink, the answer was that the recommended ink may be termed an emulsified ink which is formulated for the special printing requirements of the Lithure plate.

In reply to a question about the Lithure plate licensing fee, the answer was that Printing Plate Developments usually makes contacts with those equipped to produce long-run printing orders. The cost of the Lithure plate is approx. twice that of other bi-metallic plates.

"Will the Color Scanner replace color etchers, separation artists and color cameramen?" The answer was: The Scanner has limitations, such as size, etc. At present, the tone reproductions are not so good but color separation is excellent. One handicap is that of having to use transparencies for copy. In the one step of making the color transparency from straight copy originals, certain tones are sacrificed. The tone loss is in the original. Some hand correction is now necessary. However, with the certain improvements that are to come, the Scanner will go into wide use and popularity."

Type Clinic

AT THE Wednesday, September 12 Type Clinic, Amadeo R. Tommasini, Manager, University of California Press, Berkeley, and Chairman of the Intl. Public Relations Commission, presided. The first speaker to be called upon by the chairman was Glenn M. Pagett. Plant Supt., Typographic Service, Indianapolis. Mr. Pagett reviewed the progress which has been made in composing room equipment and practices during the past several years.

Among the phototypesetting equip-

ments mentioned by Mr. Pagett were Intertype's Fotosetter, Mergenthaler Linotype Co.'s Linofilm, the ATF-Hadego Display Compositor, the Lithomat machine sponsored by Graphic Arts Research Foundation, and the English machine utilizing principles of the Monotype hot-metal machine for phototypesetting composition.

Quoting from another source, Mr. Pagett said: "Don't get excited too soon about type composition by photography. Hailed as the greatest achievement in the past 75 years of printing, the machine is definitely a 'comer,' but don't expect too much too soon."

Regarding the importance of typographers in the printing industry, Mr. Pagett asserted: "One contemplates the day when no printer of repute will be able to secure his order or organize his work without such directly valuable help as the typographer alone can provide."

Intertype's Fotosetter was discussed by Howard N. King, Vice President of The Maple Press, York, Pa., and Typographic Counselor of Intertype Corporation.

At the beginning of his address, Mr. King asserted: "The Fotosetter introduces a new era in printing—an era as fully significant as the one which saw the birth of the slug-casting machine. The slug-casting machine put metal type composition on a production basis; the Fotosetter machine does the same for photographic composition, and does it with greater ease . . . It produces justified composition in galley form directly on film or photographic paper in one operation. Composition may include any amount of text, display and tabular matter from 4 pt. to 36 pt. in size and in lines up to 42 picas width."

He explained that two matrix fonts are required to secure type face sizes from 4 pt. to 36 pt. The basic sizes are 8 pt. and 12 pt. The 8 pt. font permits reproducing from 4 pt. up to 10 pt. The 12 pt. matrix font permits reproduction from 11 pt. up to and including 36 pt. face. A battery of eight lenses provides for letter character reproduction up to 14 different type sizes.

The justification mechanism automatically measures a composed line of letter characters for the amount of space which must be distributed to bring the line out even measure. During the exposure of the individual characters the excess space is distributed automatically between words and characters through the reproduced line. If desired, the distribution of the space can be confined to the spaces between the words.

Many details about the Fotosetter have been described previously in *Printing Equipment Engineer* were discussed by Mr. King. Some of those not previously revealed are as follows: On a hot-metal Intertype, when the operator leaves his machine, it is a simple matter for him to refer to his last slug or he can mark the copy so that when he resumes work he will know where he left off. On the Fotosetter, however, he can't look at the last slug. So when the operator leaves the machine the last line will go through the camera and on through to the transfer bar and will hang there for the operator to see on his return.

"Any combination of initial letters can be composed readily by making simple adjustments", said he. "There is no need to cut in to get proper fit. Raised or descending initial letters up to 36 pt. can be set directly with exact alignment.

"Ruled forms are set accurately and fast on the Fotosetter by using special matrices. Lines are straight and continuous without breaks or blemishes.

"Tabular matter may be set at either or both ends of a justified line."

Mr. King also mentioned specifically the auxiliary equipment supplied for handling film. The combination light table and vacuum frame is provided to facilitate insertion of the corrected lines in the film. The makeup table is provided to facilitate stripping the various film units which go into a page. Illumination of this transparent-top table is from below.

Question-Answer Period

During the question and answer period, it was brought out that the Fotosetter is being used in 11 plants. In some of the installations the machines are used for highly specialized purposes. In one plant nothing but ruled forms are being produced.

Mr. King asserted that to realize the greatest benefits from phototypesetting equipment the industry will need more and better layout men. If a plant wants sloppy work, such work can be produced; if quality is wanted, make up can be obtained for highest quality. It will be necessary to train young men to meet increasing demand for the latter type of work.

In answer to a question from the floor, Mr. King said copy can be cast up previous to setting. Variable spacing can be obtained above and below subheads. The spacing is pre-determined before the job is set.

Amadeo Tommasini, Manager of the University of California Press, Berkeley, interjected the remark here that "It is about time we prepare layouts that can be followed by the compositor without the necessity for resetting."

During the discussion there were several questions related to Fotosetter operating costs. Unfortunately, no one seemed able to answer the cost question, primarily because none of the outstanding machines had been in use long enough.

Dr. R. Hunter Middleton, Ludlow Typograph Co., discussed the vogue for ragged left and right composition in advertisements. The composition should start full measure and end full measure. The type area and the area around the type should be arranged to cause no congestion. Phrase breaking is highly important; it should be done without being poetic. Avoid prepositions on the end of lines. Uniformity of spacing is very important.

Type Clinic—Speakers and members of the question-and-answer panel for the Craftsmen Type Clinic included from left to right: Amadeo Tommasini, Manager, University of California, Berkeley, Press; T. G. Bixler, Vice President, Edwin H. Stuart, Inc., Pittsburgh; Hec Mann, Mann Graphic Arts Studio, Mt. Morris, Ill.; Glenn M. Pagett, Superintendent, Typographic Service Co., Indianapolis, Ind. Also serving on the panel was R. Hunter Middleton, Director, Dept. of Typeface Design, Ludlow Typograph Co., Chicago. Speaker Howard King was absent when picture was taken.

Club Management Luncheon

THE annual Club Management program was held on Tuesday afternoon and was capably presided over by Gordon J. Holmquist, Intl. Third Vice President. *The International and the Local Club* comprised the subject of the opening talk by J. Homer Winkler, Intl. Second Vice President. Reviewing briefly the history of the International, Winkler reiterated the importance of such an organization in the printing and publishing field.

Witness, he stated, the continual formation of new (Craftsmen's) clubs in areas that could not support a club previously, or were not interested. These localities have found it necessary, or de-

(*Continued on Page 88*)

ITCA Officers and Executive Committee

The elective and appointive officers and executive committee members of the Intl. Typographic Composition Assoc. are shown below. The selections were made at the 31st annual convention, Hotel Sheraton, Chicago, in September.

President—O. B. Powell, Chicago

1st Vice President—John R. Connell, Kansas City.

2nd Vice President—Harold R. McGirr, New York.

Treasurer—John W. Shields, Bridgeport.

Secretary—Frank M. Sherman, Philadelphia.

Regional Vice Presidents—Northeastern—Frank Lightbrown, Boston; Mid-Atlantic—Donald M. Canfield, Utica; Southeastern—Gus Russell, Atlanta; Southwestern—John A. Scott, Dallas; Mid-Western—Rawleigh Shepherd, St. Louis; Pacific Coast—Archie J. Little, Seattle, and Canada—J. Harry Wimpenny, Toronto.

Members of Executive Committee to Serve 2 Years—Joseph L. Baarlaer, Cincinnati.

Members of Executive Committee to Serve 3 Years—Warren Ruttle, Philadelphia; Harold Dantuma, Chicago; Donald Patton, Montreal; Alexander Highton, Newark; George Peecook, Cleveland, and M. L. Curry, Minneapolis.

ITCA Convention

EXECUTIVE Secretary Frank M. Sherman reports a total registration of 407 persons at the 31st annual convention of the Intl. Typographic Composition Assoc., Hotel Sheraton, Chicago, September 14 to 16 inclusive.

The 1951 convention goes to Montreal, Canada, with Hotel Windsor selected as the meeting place. The convention will be held during the middle part of September—exact dates not yet announced.

The Thursday, September 14 session was presided over by President Frederick H. Lutz of Brockton, Mass. Address of welcome was extended by Harold R. Dantuma, President of the Chicago Typographers Assoc.

Production Clinic

At the Friday morning, September 15 Production Clinic, Alex G. Highton of Newark, N. J., presented the report of the special committee on reproduction proofing. The report opened with the observation that some of the customers of members of the ITCA have become extremely critical of the reproduction proofs supplied to them. They (the customers) insist on a degree of perfection which would have been regarded as entirely unnecessary only a few years ago.

In presenting the report, Mr. Highton stated that the principal factors which enter into the securing of good reproduction proofs are these:

Type.—A few years back, foundry type would be used quite a while before replacement. In his (Highton's) shop type is replaced much sooner than formerly.

Proof Presses.—Keeping the press in good condition is just as important as having a good press. Our difficulties have diminished considerably since we established the practice of servicing all of our presses. A man comes in Saturday mornings, when there is no one else working, for the sole purpose of keeping the presses in good condition.

PROOFING

Securing the man whose combination of experience and mental traits fits him to do a good job seems to be a matter of luck. I am referring now principally to proofing on acetate. Our man had worked as a compositor, but had later been in a large lithographic plant for a period of years. Then he brought back to us a knowledge of what the requirements are in a lithographic plant.

Rollers.—We use synthetic rubber rollers on all presses, except when we experiment with an ink that requires composition rollers. The highly satisfactory results we secure seem to justify their use. We had been having a great deal of trouble because of ink drying too quickly on rollers. This trouble ended when the head proofer, who works on the day shift, finally convinced the night shift that they were not washing the rollers thoroughly.

Paper.—Many papers are used in our various plants, some preferring one brand, some another. The most popular one, so far as I know, is Kromekote. We get better results on Kromekote than on any other paper, and use it almost exclusively.

Inks.—Here again there is a great divergence in the preferences of our members. Conditions and human temperaments vary greatly in the several plants, which suggests that experimenting with several inks may be necessary in order to arrive at the one most suited to your conditions.

Transparent Acetate. Satisfactory cellulose-acetate sheets are made by several manufacturers.

The pulling of practically perfect reproduction proofs on paper appears to have been successfully accomplished by those who have made the necessary efforts; but proofing on transparent cellulose-acetate still presents a number of problems.

Our objective is to print on acetate with one impression without dusting. Some progress has been made in this direction. One of our members reports doing this, but not with one impression. As I understand the procedure, he takes three impressions on the rubber blanket on the cylinder, and then takes three more impressions on the acetate. That is six impressions. Then the sheet is hung up, like laundry, to dry. If the job is wanted quickly, it must also be dusted. It takes about two hours to dry, but drying over night is preferred. Results are excellent. But, none of the rest of us can get those same results from the same materials.

The method used in most plants is to print with black ink on the rubber cylinder, using a varying number of impressions, and then to print on the acetate with the same ink, again using a varying number of impressions. After taking the sheet from the press, it is dusted both sides with a powder (lampblack, graphite, a mixture of lampblack and talcum, powdered iron oxide black, or a combination of iron oxide black and lampblack). In our plant we use an adhesive instead of an ink. After printing the acetate sheet both sides with this adhesive, we dust with whatever color of powder is desired. The adhesive is practically colorless. We use three impressions on the rubber cylinder and two on the acetate. This adhesive must be used with rubber rollers and cannot be used with composition rollers.

An interesting comparison was made in our plant between 0.003 in. and 0.0015 in. thick acetate. When printing short forms, both worked equally well, but when printing long forms the 0.0015 in. sheet printed perfectly the full length of the sheet; but the 0.003 in. stock showed good register at the gripper end of the sheet and defective register at the end away from the gripper. The register referred to is between the impressions on the two sides of the sheet.

Some members of the committee feel that the experimenting we are doing should be done in the new Vandercook Research Laboratories. However, the varying results secured from the same experiments in the several plants indicates that there is value in making the experiments under differing conditions rather than in one laboratory.

The tests in plants of three members of the committee indicate that a paper specially made for repro proofing called Relyon Repro Proofing Paper, was a satisfactory sheet, but inclined to curl when put in the drying cabinet; that a transparent sheet with adhesive backing called Il-Luminate was disposed to wrinkle when being proofed; a transparent sheet called Roscolene was en-

(Continued on Page 93)

4 Clinics *Cover Composing Room, Platemaking, Pressroom and Bindery simultaneously at PIA Convention*

By **STAFF WRITERS**

FOUR simultaneously conducted clinics that would have delighted the hearts of *Printing Equipment Engineer's* readers had they been able to attend, occurred during the PIA convention, Chicago's Palmer House, on Wednesday, September 20. Considerable of the discussion was sparked by the fascinating equipment exhibited at the Exposition and the meetings were highly interesting. In most cases printing plant executives did the talking. Many of the statements made by them were uninhibited. Right or wrong, the statements provided much information for serious thinking about the evolutionary Graphic Arts industry.

Summary reports of the four meetings follow:

Composing Room Clinic

ARTHUR A. WETZEL, Wetzel Bros., Milwaukee, chairman of the Composing Room Clinic, suggested that all persons speaking at this clinic keep their minds on the management viewpoint rather than get lost in meticulous technical discussions. All discussions should be directed to improved quality and lowered costs. Those composing the panel were: Thomas P. Henry, jr., Thomas P. Henry Co., Inc., Detroit; Harold R. Dantuma, Reliance Typesetting Co., Chicago; Mark J. Griggs, Commercial Publishers, Inc., Parsons, Kan.; Edward Christensen, W. F. Hall Printing Co., Chicago; J. E. Turnbull, Shelton-Turnbull-Fuller Co., Eugene, Ore.

Mr. Henry discussed phototypesetting. At the moment, only two such machines are operating. These are Intertype's Fotosetter and ATF's Hadego Compositor. The speaker said a Fotosetter had been installed in his plant. He feels it, and other photographic machines, are limited by the speed of the operator, that use of film as the end product limits its market to offset and gravure for a while, that corrections are still not too easily made; the latter observation was amplified by the speaker when he said corrections are not so difficult for printers' corrections but present problems when considering customers' corrections. There is a marked difference in speed among the several types of machines. The Fotosetter is fast but the two machines tied to the Monotype system are necessarily slow. All are necessarily slower than hot metal machines. He believes the desk model Fotosetter (shown at the Exposition) may find good use in the making of corrections. Mr. Henry expressed satisfaction with the use of the Fotosetter in his shop, but it has not been in use long enough for him to have definite information about operating costs. He said the product of the Fotosetter is best used on columnar work. It is very good for tabular matter and is ideal for nomenclature and label work and in reproducing continuous script.

Phototypesetting can be adapted to increased use in letterpress work if the industry can develop a quick-etch plate, and a method of etching that will not result in ragged edges in the type. According to Mr. Henry, advantages over hot-metal type are: (1) Better quality type for offset; (2) Better line and letter spacing and greater flexibility of type design; (3) In a trade plant, the Fotosetter has an advantage where there is a great deal of mixing of type faces.

Other phototypesetting machines in various stages of development are: The English Westover machine which utilizes the Monotype system; the Linofilm (shown at the Exposition by the Mergenthaler Linotype Co.); Graphic Arts Research Foundation's Lithomat machine; a machine being developed by American

Panel Members of the Composing Room Clinic—One of four Graphic Arts Exposition "Printing Equipment Experience Clinics" conducted Wednesday afternoon, September 20, during the 64th annual convention of Printing Industry of America, Palmer House, Chicago. The clinics were jointly sponsored by PIA and the Research and Engineering Council of the Graphic Arts Industry.

Panel members and the subjects they covered (left to right): Thomas P. Henry, jr., Thomas P. Henry Co., Detroit, *Phototypesetting;* Harold R. Dantuma, Reliance Typesetting Co., Chicago, *Typewriter Composing Machines;* Arthur A. Wetzel, Wetzel Bros., Milwaukee, Chairman; Mark J. Griggs, Commerical Publishers, Inc., Parsons, Kan., *Teletypesetting;* Edward Christensen, W. F. Hall Printing Co., Chicago, *Metal Type Composing Machines;* J. E. Turnbull, Shelton-Turnbull-Fuller Co., Eugene, Ore., *Composing Room Aids and Accessories.*

Panel Members of the Platemaking Clinic—One of four Graphic Arts Exposition "Equipment Experience Clinics" conducted Wednesday afternoon, September 20, as a feature of the 64th annual convention of Printing Industry of America, Palmer House, Chicago. The clinics were jointly sponsored by PIA and the Research and Engineering Council of the Graphic Arts Industry.

Panel members and the subject they covered (left to right): Joseph M. Hughes, Nassau Photo-Engraving Co., Mineola, N. Y., *Magnesium Plates;* T. P. Mahoney, Regensteiner Corp., Chicago, *Offset Plates;* Lawrence Brehm, Western Printing & Lithographing Co., Racine, Wis., *Camera Work, Color Separation, etc.;* Karl K. Begandt, Ad-Craft Engraving Co., Detroit, *Dry Relief Offset Plates;* J. Homer Winkler, Battelle Memorial Institute, Columbus, O., chairman; C. A. Mawicke, Pontiac Engraving & Electrotyping Corp., Chicago, *Electrotypes and Stereotypes;* C. G. Maracle, Review & Herald Publishing Assoc., Washington, D. C., *Plastic Plates;* Gradie Oakes, Process Color Plate Co., Chicago, *Rubber Plates.*

Type Founders, and one being readied by the English Monotype Co.

In answer to a question about the economics of the Fotosetter, Mr. Henry said he didn't expect to save money on the Fototypesetter. Two machines running two shifts are required to take care of the investment in Fotomats—then it will be financially comparable to a slug machine in operating costs.

Mr. Dantuma discussed the Vari-Typer, the Justowriter and the Fairchild Linotype machines under the heading of Typewriter Composing Machines. He said the Vari-typer has its limitations because it operates from a segmental plate; it was his opinion that it was not susceptible of absolute control in spacing as is metal type. For example, a variation of 0.001 in. will be multiplied greatly from one side of the line to the other. These machines, except the Linotype machine, cannot use the type faces available to the typographer.

Mr. Dantuma said that manufacturers of the Justowriter had done a wise thing in stating the field of application for their machine. Quoting from Justowriter literature, he said: "The Justowriter has been designed for a particular kind of composing job. There are numerous composing machines which will set copy requiring italics, small caps, frequent changes of type face and extra sorts, but the Justowriter is the only machine which has purposely limited its field to composition requiring a single type face. In so doing it has been possible to gain a high degree of quality and obtain the highest possible speed."

The Justowriter has good speed because of the use of perforated tape in the automatic reproducing machine, the tape having been perforated and coded for justification during the initial typing by the operator.

In discussing the Lithotype machine, Mr. Dantuma because actual-cast Monotype type is used with which to print the copy, a good selection of type faces is available from which to select. He stated the Lithotype produces good quality copy for the camera. Copy can be leaded. The machine is now limited to faces from 6 pt. to 12 pt. size. It is a little slow in operation because the operator must read the scale and code the copy for the second typing.

Mr. Christensen confined his remarks to hot-metal composing machines. The Exposition offered little that is brand-new in hot-metal machines but there are some fine new models and improvements. He called attention to Lanston Monotype's 1517 die cast which increases the number of matrix characters in the case to 255. Intertype's Model G with four main and four side magazines with automatic quadding and centering devices. Mergenthaler Linotype Co.'s Comet operates at 12 lines per min. of 12-pica composition using Teletypesetter keyboard operation. He also mentioned Linotype's Model 33 on exhibition.

Ludlow Typograph Co. had nothing new at the Exposition but did have a full line of fine equipment.

According to Mr. Griggs, about 40 commercial plants are operating Teletypesetter equipment. In his plant (Com-

Panel Members of the Pressroom Clinic—One of four Graphic Arts Exposition "Equipment Experience Clinics" conducted Wednesday, September 20, as a feature of the 64th annual convention of Printing Industry of America at the Palmer House, Chicago. The clinics were jointly sponsored by PIA and the Research and Engineering Council of the Graphic Arts Industry.

Panel members and their subjects (left to right): Arthur Brooks, The Inland Press, Chicago, *Pressroom Aids and Accessories;* Richard Chamberlin, Ransdell, Inc., Washington, D. C., *Web and Specialty Presses;* Frank F. Pfeiffer, Reynolds & Reynolds Co., Dayton, Ohio, chairman; H. H. Cornay (at microphone), Press of H. N. Cornay, New Orleans, La., *Job and Cylinder Letterpresses;* H. M. Fritz, Wm. G. Johnston Co., Pittsburgh, *Offset Presses;* John Key, Screen Process Printing Association, Chicago, *Silk Screen Printing;* John Davis, jr., Judd & Detweiler, Washington, D. C., *Sheet Fed Rotary Letterpresses.*

Panel Members of the Bindery Clinic—One of four Graphic Arts Exposition "Equipment Experience Clinics" conducted Wednesday, September 20, as a feature of the 64th annual convention of Printing Industry of America at the Palmer House. The clinics were jointly sponsored by PIA and the Research and Engineering Council of the Graphic Arts Industry.

Panel members and their subjects (left to right): Mortimer Sendor, Sendor Bindery, New York, N. Y., *Pamphlet Binding;* James J. Rudisill of Rudisill Co., Lancaster, Pa., Chairman; Donald Co. Brock, Brock & Rankin, Chicago, Ill., *Edition Bookbinding;* Lewis S. Whitton, The Franklin Bindery, Chicago, Ill., *Special Bindery Operations.*

mercial Publishers, Inc.) the machines were installed to increase production. The Teletypesetters operate slug-composing machines at 7¾ lines per min and have an 8 hr. capacity of 4520 lines, but run from 2900 to 3200 lines each daily.

When he was called upon to speak, Mr. Turnbull stated a number of equipment items had been installed in his plant which have saved money in operation. These are: (1) Replaced old saw-trimmer with a Hammond Glider saw; (2) Installed a new mitering machine; (3) Put in a new Elrod machine; (4) Replaced two bulky wooden cases with three steel cabinets; (5) As the result of laying new rubber matting on concrete floors, together with the new equipment items, employee morale has been aided.

Platemaking Clinic

J. HOMER WINKLER presided at this meeting. He was assisted by panel members who were: Joseph M. Hughes, Nassau Photo-Engraving Co., Mineola, N. Y.; Thomas P. Mahoney, Plant Mgr., Regensteiner Corp., Chicago; Lawrence Brehm, Western Printing & Lithographing Co., Racine, Wis.; Karl K. Begandt, Ad Craft Engraving Co., Detroit, Mich.; C. A. Mawicke, Pontiac Engraving and Electrotype Corp., Chicago; C. G. Maracle, Review & Herald Pub. Co., Washington, D. C.; Gradie Oakes, President, Process Color Plate Co., Chicago.

In brief discussions, each member of the panel presented a few facts about his particular branch of the Graphic Arts Industry. Mr. Oakes stated that molded rubber printing plates now mostly are used for printing on cellophane with aniline ink. There are numerous uses for plastic plates in the bag industry and for some types of commercial work.

Mr. Maracle's statement was related mostly to experience with plastic printing plates for book and publication printing in his plant. He feels that plastic plates will be used in considerably increasing number in the industry.

Mr. Mawaicke said that the future looks bright for increasing use of electrotypes in the industry. Among recent important developments mentioned are the centrifugal method of casting curved plates, and a process for flattening the face of electrotype shells under pressure during the process of pouring the backing metal in the shell. The edges of the shell are crimped to form a pan and the metal is poured into the pan at high temperature. This process eliminates to a large extent the hand work formerly employed in flattening the plates. He also mentioned a longer wearing nickel deposition method at high speed. The nickel is more ductile and can be deposited in shorter time.

Mr. Begandt discussed the making of thin magnesium dry offset plates which can be made to print on any kind of paper and may be produced in any screen. For the letterpress printer, the use of these plates saves form lockup time and in the offset plant it eliminates the water motion mechanism on the press.

Mr. Mahoney said that in plant operation it is becoming increasingly necessary to double-check plate costs. In view of the fact that albumin and deep-etch plates are generally in use throughout printing plants he feels that both types of plates can be improved to do a better job on the press.

Mr. Brehm said that in camera and color work it is generally conceded there is the most room for improvement, particularly in color separation methods.

Mr. Hughes asserted that in the case of magnesium letterpress plates good color process plates can't be produced. In line and coarser screen halftone work magnesium plates definitely are superior. He doesn't think, however, that magnesium plates will revolutionize the photoengraving industry.

R. R. Donnelley & Sons Co.'s W. B. Isom stated the rotogravure process is coming into its own. Re-etching methods have been improved to secure better duplicate cylinders and improvements have been made in chrome plating cylinders for wearability on the press. At the present time there are better than 200 printers in the commercial field exclusive of the Sunday supplement and newspaper section printers.

Considerable interest was shown during the meeting in magnesium plates (high etch) for printing by direct or dry offset. In this method, the plate dampening mechanism is inactive. The magnesium plate is fastened to the press's plate cylinder in the usual manner. Apparently, plate thicknesses range from 0.015 in. to 0.032 in. Usual preferred thickness is 0.025 in. Users of the magnesium direct offset plate are not yet satisfied with it and Mr. Begandt stated it is up to the engraver, the printer and the manufacturer to work cooperatively in perfecting it. Mr. Begandt also stated it is impractical to go below a plate thickness of 0.015 in., because in etching the plate, the etcher might perforate the plate where certain depths in non-printing areas are required. In etching, the plate is handled similarly as in regular photoengraving. Normal depths in the interstices between the halftone dots are obtained. Between pages a depth of 0.008 in. to 0.009 in. is etched. According to requirements, non-printing areas may be etched as deep as 0.020 in. No routing of the plate whatever is done. Any kind of stock is suitable for dry offset printing. Dry offset plates do not wear out a blanket any faster than a regular offset plate.

During the discussion, Mr. Begandt explained that he had kept a direct offset plate exposed to the elements in a window for 1½ years. The plate has been inspected and proofed every two months; so far, said he, there has been no corrosion of the plate. The metal is more sensitive to oxidation and corrosion and should be protected with a light coat of oil while in storage. He asserted that magnesium plates won't corrode to the extent that some people would have you believe.

Mr. Oakes related that his firm had

Graphic Arts Research Has International Field Day

ON Tuesday, November 19, Palmer House, Chicago, during the Printing Industry of America convention, the Research and Engineering Council of the Graphic Arts Industry held its regular semi-annual meeting. President Frank F. Pfeiffer of the Council presided. The meeting took on an international flavor inasmuch as nine countries were represented as follows: England, France, Germany, Japan, Netherlands, New Zealand, Sweden, Switzerland, and the United States. There may have been other countries represented but such research men were not made known. Sitting in the audience, but not speaking, was Kenji Katayama, Director and Chief Engineer, of Dai Nippon Printing Co., Ltd., Tokyo, Japan.

The Research and Engineering Council, founded two years ago by Printing Industry of America and other graphic arts groups, is an independent cooperative group of 364 national organizations and individuals identified with or interested in graphic arts research and technological development.

President Pfeiffer explained the purpose of the meeting was to foster Graphic Arts Research cooperation on an international basis. He introduced singly and in turn a number of Graphic Arts research men and executives from foreign countries.

Victor Letouzey, President, Letouzey Pub. and Printing Co., and Director of Letouzey Printing Research, Paris, France, sent a letter of greetings to the Council. Chairman Pfeiffer requested G. L. Erikson, Vice President of the Braden-Sutphin Ink Co., to read it to Council members and their guests. Mr. Letouzey expressed deep regret at being unable to attend. He wrote that France is attempting to found a National Center for Graphic Arts research. The City of Paris has added laboratories to the Estienne Technical College which will be made available to pursue studies and research in the Graphic Arts. Mr. Letouzey also reviewed some of the research accomplishments taking place in France.

1.—Gosta E. Carlsson, Research Director, Graphic Arts Research Laboratory, Stockholm, Sweden, presented quite a complete picture of Graphic Arts Research in his country. The industry established a research foundation in 1942. Membership in the foundation is voluntary and is not combined with the membership of trade associations. Annual subscriptions are based upon the number of workers in each enterprise. Annual subscriptions are now 10 kronor (about $2) per worker. No contributions are received from the government. Carlsson is a graduate of the Royal Institute of Technology in Stockholm. The laboratory maintains a staff of nine persons. The programs of the Graphic Arts Research Laboratory comprises mainly technical research, technical services for the members, and an information service.

2.—Dr. W. H. Banks, Research Supt. of PATRA (Printing, Packaging & Allied Trades Research Assoc.) Leatherhead, Surrey, Eng., discussed at some length Graphic Arts research in England. PATRA's research is extensive and annual grants are supplied by the government as well as by supporting companies.

3.—Western Germany's Dr. Walter Matuschke (of Frankfurt) discussed Graphic Arts Research in Germany. He said most German manufacturers are in the "repair business." Large scale research is difficult for obvious reasons. Prewar developments like plastic type, magnesium and rubber plates have been halted. He explained a hot-melt bookbinding method had been developed, but the binding work is being done by hand. Eventually, it is hoped to mechanize the process.

4.—This illustration shows J. H. White, General Mgr., Weeks Limited, Christchurch, New Zealand. One of his observations was that a most important research objective is the improvement of offset press dampening means.

5.—Tall and of serious mien, A. F. Gygax, President of Busag, Photoengraving Co., Berne, Switzerland, said that from 100 to 200 thousand francs per year (or an average of about $40 thousand) is included in Graphic Arts research in his country. The photographic laboratory at the University of Zurich is very good.

6.—Dr. J. H. Van der Meer of the Netherlands described TNO (Research Institute for the Printing and Allied Industries). The Institute employs 22 people. Annual appropriation totals 350 thousand guilders—one-half contributed by industry and half by TNO. Printing problems are accepted only if the plant involved pays the cost. If the problem is not peculiar to one plant it is taken to the Institute's laboratories and the results are made

had one experience with Vinylite plates which were mounted on a rotary press. In this case the heat from the driers on the first deck of the press followed the web into the second deck and softened the plates. The plates looked like they had become worn through printing wear.

Mr. Maracle reported he has secured 100 thousand impressions in his plant on rotary press runs from plastic plates, but this did not represent the printing life of the plate because the runs are limited. His book runs are short, perhaps 5 thousand on flatbed presses being the maximum. Over a period of five years some of the plates have been run intermittently and repetitively, meanwhile being put in storage ready to be brought out whenever a run is necessary.

Mr. Mawicke stated he had never found a thermoplastic plate to keep its shape exactly in printing. Heat transmission from the inking rollers and the printing pressure tends to cause halftone dots to spread.

It was brought out during the discussion on magnesium plates that repair operations are of a limited nature. This limitation is one of the most serious drawbacks to their use. It was suggested that aluminum solder No. 8 can be used to cover defects such as router gouges. A bead or blob of the solder is applied to the place to be patched after which the surface can be reworked. It is impossible, however, to fasten two plates together.

Mr. Maracle related that combination forms are used in his plant for making letterpress plastic plates—that is, the forms consist of type, rules and halftone and line cuts. He asserted that form preparation for the making of plastic plates does require a little more care than for electrotyping. On a flat plate, the printing surface secured in the plate wil be no better than the form elements with respect to height. Careful fill-in of the form is required. Best results are obtained when the type is all-new and the cuts should be mounted on metal base, since wood mounting is unsatisfactory.

A method has been developed in Maracle's plant to level the printing surface of plastic plates. The plate is immersed in a water bath at 190 deg. tem. After it is softened, it is placed face down on a highly polished steel plate. A sheet of sponge rubber is laid on the plastic plate. Pressure of 120 lbs. for about 1½ min. is applied, after which the plate is shaved to proper thickness. Contact of the printing surface of the plate with the steel slab removes all unevenness. He ex-

known to all. A monthly bulletin is published. Presently, a study is being conducted on the humidity and temperature in 17 plants. He remarked that one and a half years' time will be required to obtain information.

7.—Chairman of the meeting was President Frank F. Pfeiffer of the Research and Engineering Council, who refreshingly confessed inability to pronounce correctly all of the names of the distinguished visitors on the platform. Other speakers experienced the same difficulty. The meeting went off like clockwork, however, and the humor involved seemed to please everybody.

8.—Expansively, Morris Kantrowitz, Director, Technical Division, U. S. Government Printing Office, presented an excellent paper on *Research in the Government Printing Office*. He defined the functions of the Technical Division. The various reports issued by the GPO containing results of investigational work by his Division are impressive. While the Division originally was established in 1922 to conduct Graphic Arts research, to prepare specifications for purchase of materials, and to exercise technical control over the quality and production of materials used or produced in the GPO, it became apparent during his discourse that the Graphic Arts industry in general has much to be thankful for as the result of publication of the Division's findings with respect to paper, ink, press rollers, type metals and platemaking operations.

He enumerated the technical publications which had been issued as the result of cooperative research between the GPO and the Printing Industry of America, Inc. (now cooperatively with the Research and Engineering Council) There are twelve of these bulletins. The latest, which he announced at this meeting is entitled *Paper Boards for Bookbinding*.

9.—J. Homer Winkler, Technical Advisor, Battelle Memorial Institute, Columbus, O., presented a paper on *Graphic Arts Research in the United States*. His analysis of Graphic Arts research since the early 1900's was quite complete. He also discussed research expansion after 1940 as the result of the solving of problems associated with huge war production activities by the employment of technically trained men and the application of technical research. It appeared to Graphic Arts observers that much benefit could be gained through application of research methods to the development of new materials and new techniques and for the solution of production problems. Thus the progressive companies and branches of the industry began to invest in research. The broad objectives variously listed were improvements in quality, less spoilage and makeovers, less time required for manufacture, elimination of bottlenecks in production, and improved materials. Wholly new processes were wanted as well as improvements in present techniques. Time-motion studies and engineering surveys were made to improve efficiency. A reduction in production costs was an important objective. If wages were to be increased, it was necessary to make it possible to produce more per man hour.

As a result of this movement, the greatest development in the Graphic Arts has been the more general acceptance of technical research and engineering development, control and production management . . . It has been roughly estimated that about $7.5 million was expended for research and development in the Graphic Arts in 1949. Of this amount, about $4 million was spent by private companies producing printing or printed items, and by manufacturers of equipment and supplies for development and control.

Mr. Winkler stated that "The size of the printing and publishing industries in this country would seem to warrant government assistance for research . . . Speaking for myself, the fond hope is expressed that a well organized plan for government support of an effective program of fundamental research on printing problems will become a reality in the near future."

Among the recent exceptional research developments mentioned by the speaker were: Intertype Corporation's Fotosetter for setting type photographically; Fairchild Electronic Engraver; Electronic Color Scanners of Time, Inc., and the International Printing Ink Div. of Interchemical; Xerography and the PPR Plastic Electrotype Molding Process, both developed at Battelle Memorial Institute; Capital City Printing Plate Co.'s Centrifugal Method of Backing Up Curved Electrotype Shells, and the Notched Binding Process of the World Pub. Co. for edition binding.

"Printing," said Mr. Winkler, "is becoming more independent of personal judgment as the result of increased application of technical control to many operations . . . The need for more technically trained men is apparent . . . A conservative estimate of the number of college graduates with technical training engaged in the various activities of printing and publishing would exceed 5000."

plained that the operation must be done quickly.

It developed during the discussion that there is no saving in the making of a single plastic plate over the making of an electrotype. In order to effect a saving in cost over electrotypes it is necessary to produce not less than four plastic plates. Electrotype price on book work compares favorably with plastic plates.

Part of the discussion centered around the making of thermosetting plastic plates. It was brought out that only one company has announced the development commercially of a thermosetting plate.

One member of the panel asserted that where plastic plates are made in a captive plant, executives of the plant would accept plates with defects that would not be accepted were the plates to be made in a commercial platemaking plant. If the customer would always be careful to lock up forms properly which are to be sent to the foundry, satisfactory electrotype plates would be insured.

Dimension of rubber plates can be held to close tolerances. In most cases, it is not necessary to hold the length of a plate closer than 0.005 in. on such jobs as candy wrappers and the like. However, on continuous design printing rolls great care is exercised to eliminate evidence of the line where the pattern meets. For manifold work, the plate is vulcanized on brass base and tolerances are closely held.

In answer to the question: *What is Ektachrome?* Mr. Brehm said: "Ektachrome is a photographic subject in color but is not a transparency. It is photographed by reflected light like a painting. Dyes are used to replace the silver in the image. Ektachrome has the advantage that it is possible to pick up a black and white print and convert it to color. It is also possible to replace one dye with another and thereby change the character of the color print."

Mr. Mahoney explained the difference between bi-metal and tri-metal offset printing plates. In the bi-metal plate (such as the Aller plate), copper is plated on the base metal which is water receptive stainless steel. Using a negative the coating is exposed, developed, cleared and light hardened. The unwanted copper is etched away exposing the stainless steel in the non-printing areas. The plate is then rubbed up, gummed and ready for press.

In a tri-metal plate such as the IPI plate, the greasy and water receptive

Directors' Meeting, National Printing Equipment Association, Palmer House, Chicago, Tuesday, September 19.

At the Directors' meeting and the ensuing Membership meeting little of immediate public interest was reported. H. G. Evans, Vice President, Hamilton Mfg. Co., was elected a Director to succeed R. C. Corlett of Goss Printing Press Co., for the term ending in 1952. All other officers and directors were re-elected.

In this composite picture showing the Directors in session are (clockwise around the table):
J. E. Eddy, President, Miehle Printing Press & Mfg. Co.; Fred S. Tipson, Treasurer, T. W. & C. B. Sheridan Co.; B. S. Hanson, Manager, Challenge Machinery Co.; Jos. F. Costello, President, Lanston Monotype Machine Co.; Harold T. Simpson, President, Printing Machinery Co.; Oscar C. Roesen, Vice President of the Association and President, Wood Newspaper Machinery Corp.; James E. Bennet, Secretary of the Association; R. V. Mitchell, President of the Association and Chairman of the Board, Harris-Seybold Co.; Ed. Spencer, Assistant to Mr. Mitchell; Edward G. Williams, President, American Type Founders, Inc.; Donald C. Cottrell, President, C. B. Cottrell & Sons Co.; Harry L. Gage, Educational Director; Harry G. Willnus, Vice President, Intertype Corporation; Phillip P. Merrill, Executive Vice President, Ludlow Typograph Co.; John O. King, Sales Manager, Ludlow Typograph Co.; Walter A. Sittig, General Manager, H. B. Rouse & Co.

metals are both plated on a third base metal which serves only as a support. Zinc is usually the base metal. Using a positive, a stencil is exposed into the chromium. After development, the image is etched through the chromium to the copper. Proper counter-etching activates the chromium and greatly decreases the etching time. The plate is cleared and the base and developing ink are applied. Removing the stencil then exposes the water receptive chromium in the non-printing areas. The plate is then gummed and is ready for press.

Pressroom Clinic

THE Pressroom Clinic drew a fine attendance. Frank F. Pfeiffer, Vice President and General Mgr. of Reynolds and Reynolds Co., Dayton, O., was Chairman. In the panel assisting in the meeting were: H. N. Cornay, Press of H. N. Cornay, New Orleans, La.; John Davis, jr., Judd & Detweiler, Washington, D. C.; Richard Chamberlain, Ransdell, Inc., Washington, D. C.; H. M. Fritz, Superintendent, Wm. G. Johnston Co., Pittsburgh, Pa.; Arthur Brooks, The Inland Press, Chicago; John Key, Secretary, Screen Process Printing Assoc., Chicago.

H. N. Cornay, Press of H. N. Cornay, New Orleans, commented on job and cylinder letterpresses as the work-horses of the industry. He likened the Exposition in many ways to "different fender and grill" automobile promotion sales—with few new actual designs. The small two-color high speed presses on exhibition do fulfill a long felt need. He recommended that added presses should cover a basic standard sheet size, adding "We're all penalized when such non-standards are produced." He concluded "The trend to small high speed equipment is here; we must modernize with new equipment."

John H. Davis, jr., Judd & Detweiler, Washington, D. C., commented "Our views are slanted by what we use"—specifically on the National Geographic Magazine production. "Our five-color sheet fed rotary press gives us what our customers want. Our prime objective is to improve on the quality of paper and equipment. "I didn't find too much at the Exposition (regarding sheet fed rotary letterpresses) except in the 2-color field." His company likes to employ heat-set inks but *quality* is demanded by the customer. He concluded: "The Exposition is most educational—particularly for the small printer in the job field."

Richard Chamberlain, Ransdell, Inc., Washington, D. C., commented on maintenance and housekeeping from his experience with web presses and specialty presses. While qualifying his remarks by stating that his experience is limited to what comes over his desk as cost executive, Mr. Chamberlain stated that Ransdell, Inc., maintains a standardization of size. The plant's operation is a one-size magazine production (the house prints 35 different magazines all of one size). He cited such problems as featherbedding (five men employed instead of three), and the need for training web pressmen —there have been none in the District of Columbia area. His shop uses the men in versatile manner—flatbeds to rotaries to webs. Plant executives also strive to divide the press up into two magazines running at one time (if the runs are comparable). Mr. Chamberlain also recommended a three-shift operation from the standpoint of overhead distributed over more hours and that the third shift really is a moneymaker. Mr. Chamberlain offered PIA—Research and Engineering Council's Manual EQ-2 as the best source of information on Preventive Maintenance.

Harry M. Fritz, Wm. G. Johnston Co., Pittsburgh, said his plant now runs at 50/50 capacity—letterpress and offset. Concerning the Exposition he noted that while some progress has been made machine-wise, in the offset field not as much improvement is noticeable as in other branches or fields. "Our greatest gain is in the range of size and speed" commented Mr. Fritz. "We tried to get small sheet size offset presses manufactured for years. It took one press manufacturer to start the ball rolling—then all wanted to be in on it." Mr. Fritz concluded "Production workers and supervisors hold the key to cost reduction."

Arthur Brooks, The Inland Press, Chicago, looking at the Exposition in terms of Management, noted increased efficiency possible through the lower cost angle. He remarked such pressroom aids and accessories at the Exposition as spray equipment, static eliminators, color separators and fountain dividers. In the offset field, dampener covers and washing machines were notable. The value of money to be saved to management is in one spot: the accessories and aids are valuable for specific jobs. It is Mr. Brooks' observation that large flatbed presses—although somewhat obsolete—can do the Inland Press trade publication printing cheaper than probable smaller or newer installations.

John Key, Secretary of the Screen

At Dinner Meeting, National Printing Equipment Association, Palmer House, Chicago, Tuesday, September 19. 1.—(Left to right) George S. Dively, President, Harris-Seybold Co.; Harold T. Simpson, President, Printing Machinery Co.; G. A. Heintzemann, President, Dexter Folder Co.; J. E. Eddy, President, Miehle Printing Press Mfg. Co.

2.—(Left to right) Donald C. Cottrell, President, C. B. Cottrell & Sons, Co.; Gordon Montgomery, President, Miller Printing Machinery Co.; Joseph H. Costello, President, Lanston Monotype Machine Co.; Harry G. Willnus, Vice President, Intertype Corporation.

3.—(Left to right); Fred M. Brackett, Brackett Stripping Machine Co.; J. S. Kirkpatrick, Sales Manager, Chandler & Price Co.; George Morrison, President, The Morrison Co.

Process Printing Association, Chicago, remarked the "poor relations feeling" the silk screen process has experienced as it has evolved from a manual operation to a mechanized process. He pointed out the basic difference in the process from letterpress: "We print *through* the plate."

A question and answer session on rated press speeds observed in printing plants indicated that in letterpress several had to come down on the rated speed for top quality, but operated offset at top speed and got it.

On the relative merits of wet offset spray versus dry offset spray there were various opinions. Several were of the opinion that troubles still exist whether wet or dry spray employed. Mr. Davis commented: "We spray the first run with wet spray and shoot dry powder on the second run." Judd & Deweiler is using press vacuum cleaners to carry off the dry powder used on backup.

Wet sprays apparently are virtually eliminated in flatbed circles in favor of dry sprays but on five-color presses the consensus was that wet sprays should be used on the first side, since wet spray adheres more to the paper than to the plate, and dry spray used for backup. Conde Nast uses dry spray only. Cornay said that running pipes in floors from compressors to presses was a nice idea in theory in his new plant but the pipes got damp and clogged and overhead piping had to be installed and the floor piping abandoned. A common compressor for all sprays is better than individual installations.

There was some discussion of Bishop premakeready methods and the Bista overlay displayed at the Exposition. A few commented favorably; said old chalk overlays are not much used now. Color presses have one common impression cylinder, it was noted, have to have makeready built into the plate.

"The three shift operation improves when you have your best supervision on the night shift" suggested Mr. Pfeiffer. He also spoke of the trend that people who would rather work nights than days in metropolitan areas.

Gas dryers or gas flame was considered superior to sheet dryers by the members present. Gas was considered superior in that it will take the static out of paper.

In answer to a question as to whether the attachment for Miehle two-color press to make it a three-color press is successful brought the comment that Western Printing and Engraving, Racine, is operating successfully.

Bindery Clinic

AT THE Bindery Clinic, James J. Rudisill of Rudisill & Co., Lancaster, Pa., presided as Chairman. He was assisted by Mortimer Sendor of the Sendor Bindery, New York; Lewis S. Whitton, The Franklin Bindery, Chicago, and Donald C. Brock, Brock & Rankin, Chicago.

Panel members reviewed the equipment seen at show, while the discussion period centered around packaging, static, counting and stamping problems. In general the panel agreed that evolution, not revolution, was the keynote of exposition.

Mr. Sendor noted particularly the KK Cleveland folder, the lighter and less expensive Baums, Rosback's new small two-head stitcher, the larger Christensen gang stitcher, and the notable developments in collating equipment. Also the

(*Continued on Page 92*)

Comet Casts 12 Lines Per Minute

ESPECIALLY well suited to automatic Teletypesetter straight-matter operation, Mergenthaler Linotype Co.'s Blue Streak Comet is a simplified, two-magazine linecasting machine which was designed to produce 12 lines of 12 pica slugs per min. The Comet, which is a non-mixer, may be operated by Teletypesetter or it may be operated manually, with or without selfquadder. It was exhibited and demonstrated for the first time at the recent Chicago Graphic Arts Exposition, September 11 to 23.

The Comet may be operated by Teletypesetter or it may be operated manually, with or without self-quadder. Modifications in machine parts and new parts have been designed to permit high-speed Teletypesetter automatic operation.

According to Col. Gordon B. Welch, Vice President in Charge of Research and Development, standard magazines and excapements are used on the Comet. To permit high-speed operation, the two magazines have been pitched at an angle

(Continued on Page 80)

Fig. 1.—View of Mergenthaler Linotype Co.'s Comet Teletypesetter (or manually) operated line composing machine. Through a quadder control box, the quadder is made operable manually or by Teletypesetter keyboard operating unit. The quadder automatically operates left, right or center quadding from the Teletypesetter tape, three additional signals being punched into the tape itself. A set of relays carries the quadder signal along with the assembled matrix line through the machine cycle, permitting three matrix lines in circulation at one time without crossing the signals.

The assembler slide brake is operated ("bite" of brake released from the slide) by a solenoid just previous to the raising of the assembling elevator to insure that the last matrix at the right-hand side of the line is positioned upright and is fully within the assembling elevator front and back pawls.

On an overset matrix line a lever is struck to energize a solenoid which in turn moves a hook to prevent the raising of the assembling elevator to the delivery slide.

The box at upper right of keyboard supports a number of switches as follows: The lamp at upper left, when lit, indicates that the power is on; the second lamp immediately below indicates the Teletypesetter keyboard operating unit is ready for operation; the toggle switch at bottom is used when it is desired to operate the keyboard manually; the four push buttons at right are used when it is desired to operate the keyboard manually without quadder, or if the operator desires left, center or right automatic quadding.

Fig. 2.—Here the swinging assembler front is shown in open position. A direct drive is used and extends from the pulley on the intermediate shaft to the assembler driving pulley. It will be noted that the gear train in the assembler block has been eliminated. In its place a toothed rubber-fabric belt is mounted on sprockets on the driving pulley shaft and the assembler star wheel shaft. Mounted on the plate above the assembler driving belt can be seen the switches for automatic operation of a signal light and automatic shut-off for the Teletypesetter operating unit. At lower left of the assembler front plate is shown a terminal block for various circuits.

Fig. 3.—The keyrod frame is removable after loosening two knurled head screws. The line-for-line double lower case attachment is shown at upper right of keyrod frame. It is operated to alternate channel positions by the delivery lever.

Fig. 4.—The pear shaped lever at upper right is the latch for locking the swinging assembler front in normal position. It can also be used to hold the assembling elevator in locked position which permits freedom when the machinist is working on assembler slide parts.

Fig. 5.—At left is shown the hand wheel for adjusting the left-hand vice jaw. There is a constant tieup between the adjustment and the left-hand vise jaw. One turn of the wheel moves the vise jaw three picas. The horizontal pica scale with pointer is easily visible to the operator. At the right of the pica scale is a vernier adjustment for odd-point adjustment of the vise jaw. The small knob in the center of the vernier adjustment is for locking the vernier setting.

Fig. 6.—View of mold turning apparatus with which everybody is familiar. However, a new device has been introduced in the mold turning mechanism of the Comet. The speeded up operation of casting slugs from 7 to 12 lines per minute has greatly increased the moment of inertia at which the mold disk begins to rotate and has also increased the momentum of the disk. To express it another way, the acceleration and deceleration of the mold disk when starting or stopping has been brought under control by a device before the mold turning pinion is engaged by the cam segments. This is accomplished through two blocks (one of which is shown at *1*), one on either side of the axis and on the back face of the pinion. On the outside face of the segment and projecting from either end, there is a guide plate, one of which is shown at *2*. When the guide plate at the front end of the segment engages the block at the rear face of the mold turning pinion, it starts the turning of the mold disk immediately before the segment engages the mold turning pinion. Likewise, just after the back end of the segment leaves the mold turning pinion, guide plate *2* engages block *1* and breaks the momentum of the revolving mold disk. Thus, in the first instance, the mold disk locking studs are presented to the stud blocks in the vise frame smoothly and accurately and without chatter in the mold disk. In the latter instance, the deceleration of the mold disk is accomplished without putting the strain on the mold disk turning shaft brake or the segment and pinion teeth.

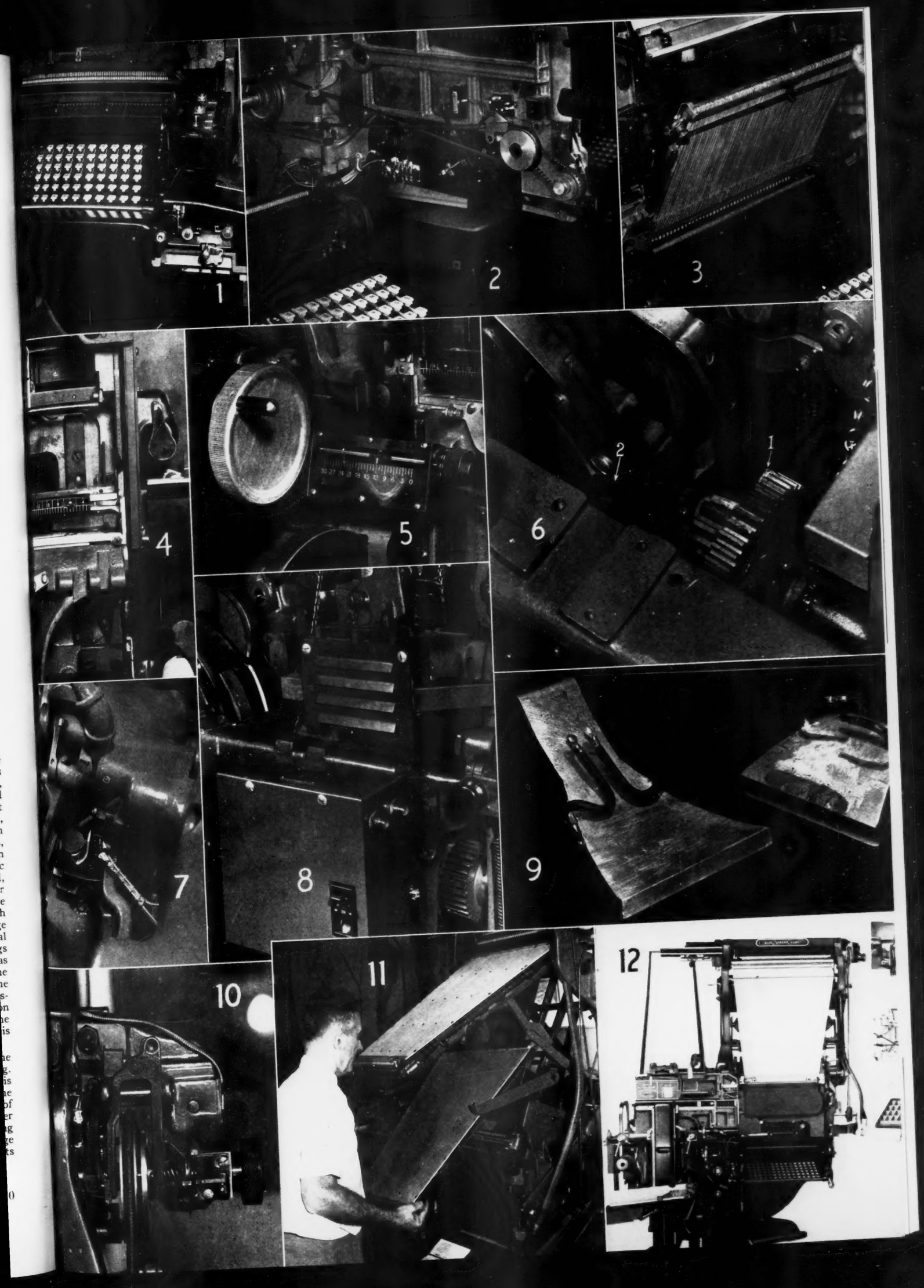
Fig. 7.—Top view of Comet's pot pump lever bracket and pump stop. Here is shown the 18 v. rotary solenoid which operates the pump stop lever for no-cast. The solenoid is actuated by a contact in the matrix-face of the left-hand vise jaw when the matrix line is not of sufficient expansibility to permit casting a slug. Small opening in pot cap permits freedom of movement for pig being fed into pot.

Fig. 8.—View of Comet's Micro-Therm electric pot specially designed control and relay boxes. The control box is mounted on the pot and the relay box is mounted on the mold gear arm outside the machine. In this apparatus, the low voltage circuit runs through the micro switch but the relay switch carries the current load. Thus, the control apparatus has been redesigned so that no current goes through the switches. As will be seen, the cover for the control box is vented. The box now contains both the mouthpiece and throat controls. A bi-metal safety switch has been placed in line with a circuit breaker which will cause the unit to throw out if the metal temperature should reach 625 deg. F. such as might occur if the metal level in the pot is greatly diminished on account of faulty feeder action. The pot heating elements are of 1500 w. capacity. The temperature governing bulb and bellows will operate safely at this maximum degree of temperature. The covers of both control boxes are fastened with half-turn snap screws to permit instant access.

Fig. 9.—View of standard pot crucible throat heater (left) and mouthpiece heater (right). The Calrod heating units are cast in machined aluminum blocks to insure all-over surface contact with similarly machined surfaces on the throat and mouthpiece sections of the crucible. The heating elements are of 1500 w. capacity and each is held in place by two screws. This construction permits heater removal without removing the crucible from the pot jacket.

Fig. 10.—The distributor screws are of aluminum alloy. In addition, the distributor clutch has been redesigned. The combination of the alloy screws and the clutch action permits throwing out the clutch at much lower pressure than previously. The lower front distributor screw "floats" and will be stopped in its rotation by any obstruction $\frac{1}{16}$ in. to the left. In normal operation, the screw is held to the right by the clutch lever. It will be noted in Fig. 10 that the yoke-shaped clutch lever is pivoted on a shaft which runs parallel with the axis of the distributor screws. Thus, when the lower front distributor screw meets an obstruction such as a matrix tangled with one of the channel entrance partitions, the screw moves to the left. This permits the distributor clutch lever to be disengaged and to rotate backwardly through an arc of a circle. Now, to explain how the distributor screws are stopped, it will be noted that on the right-hand leg of the clutch lever yoke in Fig. 10, a knife-edge disk is mounted; also, behind the disk there is a short section of rotating spiral; when the clutch lever loke moves backwardly as explained above, the knife-edge disk drops between the threads of the rotating spiral; the spiral working against the knife-edge disk retracts the leather facings on the clutch disk from the driving pulley disk with which it has been in contact. The small lamp beneath and in front of the distributor screws is illuminated under certain conditions. The light is signal-operated through a micro-switch to denote a distributor stop; at the same time, the switch also stops operation of the Teletypesetter keyboard operating unit; also, when the light is illuminated, it is signified that the matrix delivery belt is shut off.

Fig. 11.—As has been stated in the accompanying article, the operating angle of the magazines is 70 deg. in place of the 37 deg. angle on a standard Linotype. In this Fig. 11, the operator is shown removing the lower magazine. To do this, he places the lower magazine in operating position; he raises the lower end of the upper magazine with the fanning handle; he lifts the lower magazine off the escapement bar by means of the removing handle, he then lifts the lower magazine off the center bar ledge and slides the lower magazine down the removing arms and lifts off the magazine.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The ABC of OFFSET

For Letterpress Printers

By George Jos. Lenzer

VIII—THE COPYBOARD

THE object plane of the process camera assembly is the copyboard Fig. 19a to f inclusive. Because of the numerous variations in operational procedure, resulting from the many differences in size, surface texture, character and thicknesses of copy to be reproduced, consideration must be given to the copy holding attachments and devices.

> Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

In construction there are two basic types of copyboards for holding opaque copy (open faced Fig. 19a) upon which copy may be attached by various means, and the (glass covered type Fig. 19b) in which the copy is sandwiched between a rigid or flexible support and a sheet of glass.

For the reproduction of transparent copy, such as color films (Kodachromes, etc.), positives and negatives, and other transparent materials, some other device is essential, because such work is photographed by transmitted light.

Open faced copyboards, generally of wood panel construction, allow for fastening the copy with nails, tacks, self-adhesive tape, etc. Some copyboards, either wood or metal, are interlaced with slots or grooves, Fig. 19c, and spring clips provide the means for attaching copy without the use of tacks, nails, self-adhesive tape, staples or other fastenings.

Because of difficulty in achieving perfect flatness on the different wooden paneled copyboards with wrinkled, tissue-like copy, some textiles and similar material, open faced vacuum copy holders have been developed, which, through atmospheric pressure and suction hold the copy in place without nails, tacks or pins and with a minimum of effort in positioning the copy.

The wooden copyboard holds a permanent place in modern camera manipulation, because it is the only practical means for supporting overly large copy and of combining copies of different degrees of thickness. Copyboards of this kind are most efficient when arc lamps must be positioned at odd angles in order to retain or minimize surface textures or characteristics of copy which, if glass covered, might cause distortions or undesirable reflections from the highly polished cover glass.

Glass covered copyboards of simple construction consist of a metal frame supporting the cover glass, which is hinged to one side of an open faced, felt covered copyboard on which the copy is positioned, as in Fig. 19b. Resilience of the felt and its thickness constitute the limitations of the copy thickness.

Copyboard Variations

The Pressure Back—The pressure back copyboard, also called a floating type copyholder, is generally constructed with a solid felt covered board, attached to spring supports. With its glass cover frame, this arrangement will accommodate copy up to a thickness of 1 in., (and in some instances, more), but only as long as the thicknesses are uniform.

The Pneumatic Bag—To photograph open books or copy of great variation in thicknesses which must be placed under glass, other devices must be used. For work of this nature, the pneumatic bag (air-cushion) is the most efficient. The bag is placed between the glass and a rigid support. After the copy is positioned on the surface of the bag, and when the frame is closed, air pressure is adjusted so as to force the copy against the glass cover.

Vacuum Type Copyboard—Wrinkled or tissue thin copy may best be accommodated in a vacuum type copyboard, constructed in a manner similar to a vacuum printing frame. Optical contact between copy and the cover glass is obtained through suction and atmospheric pressure.

Most glass covered copyboards can be tilted and lowered to a horizontal position, affording convenience for the insertion and removal of copy. An additional advantage of glass covered copyboards is that, regardless of copy thickness, the copy surface is always aligned and coincident with the object plane, which is desirable on cameras equipped with scale focusing devices.

Transparency Copyboards — Transparencies, as copy, create many other problems requiring different handling and suitable means of accommodation. Glass negatives or positives in some instances are supported between clamps on adjustable bars which are incorporated in a metal frame, Fig. 19e. Or they may be positioned in some one of a set of wooden frames, which generally consist of five kits, called the Levy Positive-Negative Kits, Fig. 19d. These kits are sets of interlocking frames of different sizes, which in single units, make possible a range of openings corresponding to standard plate sizes.

Incorporation of either of the fore-

Decisions Affecting Employees

Abstracted from address delivered before convention of National Association of Photo-Lithographers, Hotel Statler, New York, N. Y., October 1949, by Frank A. Myers, Treasurer, Copifyer Lithograph Corp., Cleveland.

THERE is a big difference between the right to *think* and the right to *decide*. The good supervisor never delegates the right to decide management questions. He tells his people in advance the things that will affect them. Possible changes and new policies are first discussed. A change affecting human relations should not be announced until employees are well agreed the change is desirable. If you find your employees are not sold on making a change your way—you postpone action. You bring out again the reasons for doing it your way. You find out why employees want to do it differently. Before you make your decision you know pretty well whether the time is ripe to make the change. You know whether it will be accepted, and employees will be happy about it. Then you decide as you originally planned, or you modify somewhat, or you postpone decision to a more favorable time.

The very worst thing you can do is make a decision affecting your people and then post it cold on the bulletin board—"Starting Friday the shop will work overtime" or "Starting next week there will be no smoking in the wash room." If a decision affecting people is published in your house organ it should never come as a surprise. Your channels of communication, or *grapevine* should work both ways, up and down. It is easy to get a problem talked about either in group meetings or in the wash rooms. Usually employees will come up with about the same solution as you do if you give them enough facts.

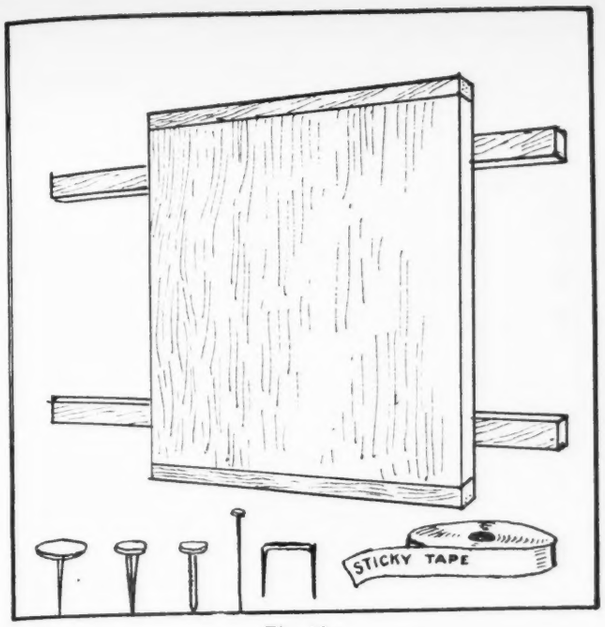

Fig. 19a.

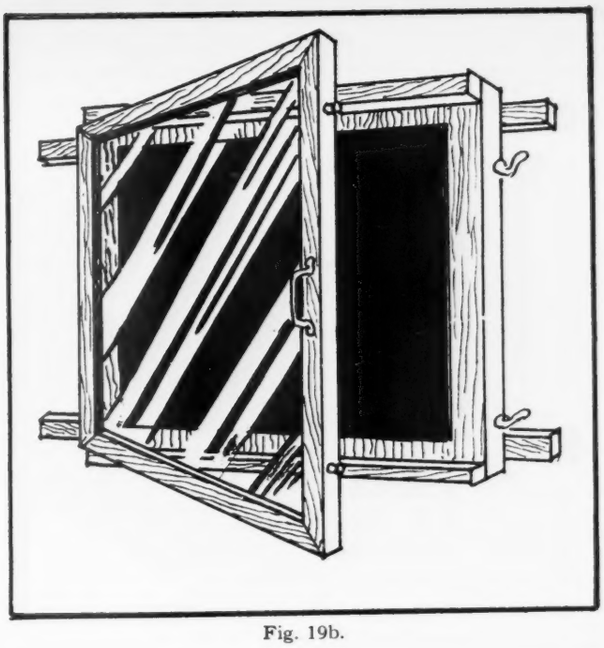

Fig. 19b.

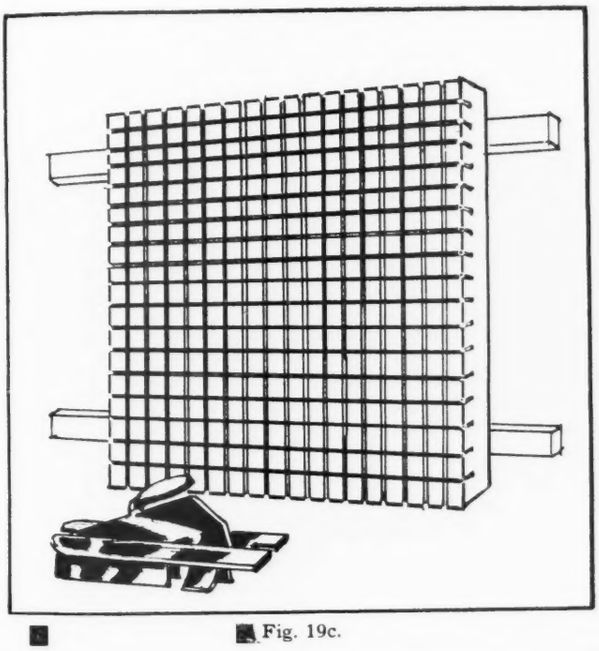

Fig. 19c.

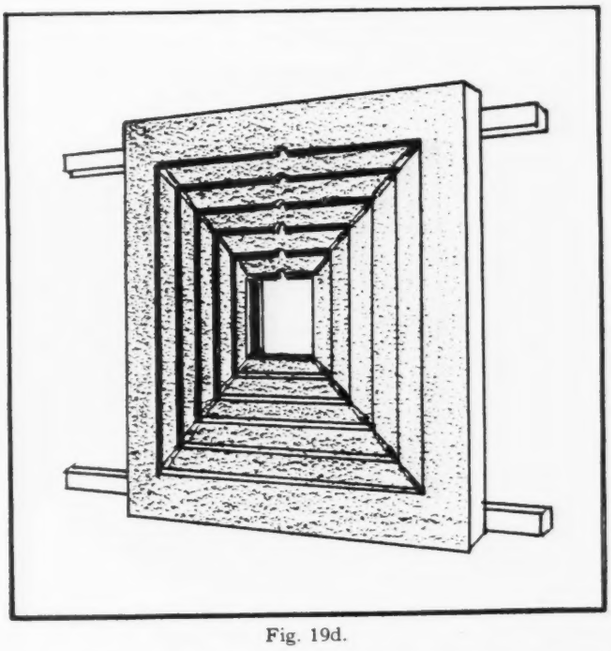

Fig. 19d.

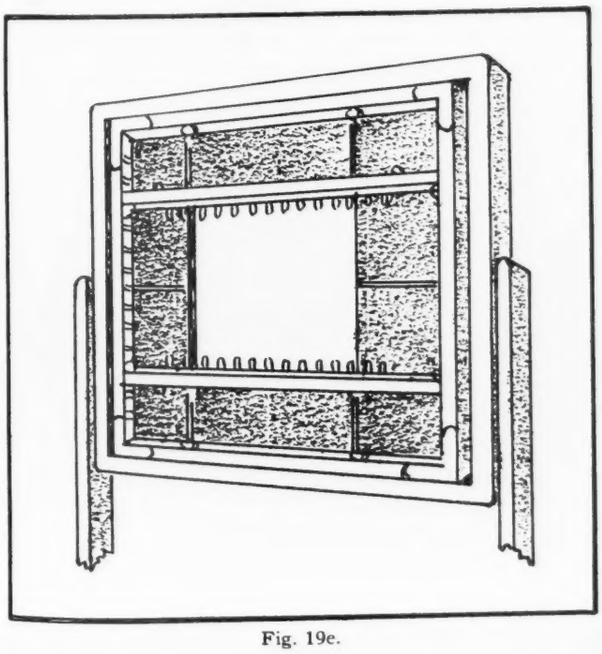

Fig. 19e.

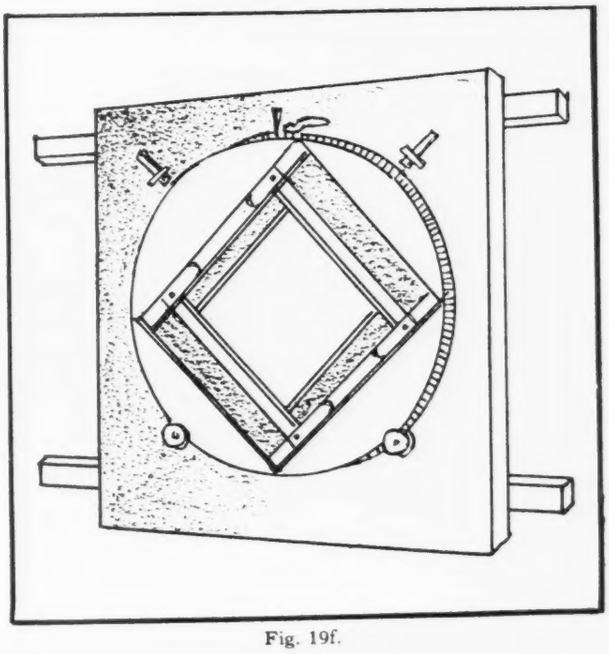

Fig. 19f.

MULTIPLE COMBINATION ASSEMBLIES

REMOVABLE	REPLACEABLE WITH
Wooden or metal	Positive negative kit, clamp and bar assembly, or rotating panel.
Wooden or metal	Removable and tilting glass covered assembly; or vacuum board.
Clamp and bar	Sliding model, wooden or metal copyboard, tilting, floating type spring pressure backed, glass covered copyboard.

going methods is possible with several of the copyboard carriages, and removal of the glass covered copyboard exposes the device for immediate use.

Provision is made for the incorporation of a ground glass or opal glass diffusion panel which is used when working with direct transmitted light—or a white cloth or paper curtain when reflected light is required.

Rotating Circular Panel Boards—Where rectilinear halftone, or any of the several kinds of contact screens are used in the production of positives or negatives for reproduction purposes, especially when producing color separations requiring different screen angles, another arrangement for holding copy is essential. In this instance, a solution is found in the rotating copyboard, Fig. 19f, which may be made either of wood or metal. Boards of this type can be made to conform to any of the basic types of copyboards.

The outer edge of the circular rotating panel, Fig. 19f, is graduated in degrees, by reason of which any screen angle can be obtained in the production of color separation negatives or positives.

For the accommodation of continuous tone negative or positive transparencies when these are the copy, an opening within the circular rotating element is fitted with adjustable bars and clamps which support the transparency.

For conversion to an open face copyboard, suitable for opaque copy, the opening in the circular element is fitted with a wooden or metal panel of the correct size.

With this arrangement, correct screen angles are attainable, regardless of copy, whether transparent or opaque. By replacing the unit with a glass covered copyboard, the overall utility of the object plane is greatly improved.

For Fluorescent Reproduction[1]—For use with the fluorescent process of reproduction, the copyboard is incorporated as a fixed unit in a specially constructed hood assembly. The side panels of the enclosing hood are equipped with openings fitted with sliding filters. The function of these is to permit transmission of the ultra-violet light rays. When the filters are slid down, thus opening the windows, the incident white light can be utilized for conventional copy illumination. So that the copyboard can be made more efficient by utilizing an interchangeable feature of multiple combinations, *i.e.*, the accommodation of opaque or transparent copy, the arc lamps used for copy illumination should be free moving models.

[1] The Fluorescent Process—Eastman Kodak Co., Rochester, N. Y.

Copyboard Masking—Black masking devices are generally included with the bar and clamp type copy holders, by which all incident light is excluded on all sides of the transparency.

Levy Positive-Negative Kits are self masking, Fig. 19d. Each frame and its opening conforms to the size of the standard photographic plate used, positive or negative.

When opaque copy is being photographed, and a glass covered copyboard is being used, it is advisable to mask the cover glass on all sides of the copy. This precaution will assist materially in the reduction or elimination of light flare, glare, hot spots and harmful reflections emanating from the polished glass surface, of the copyboard.

Precision for Color—The utmost operating precision is necessary for color work. Consequently, cameras built for color reproduction are more rigidly constructed than those used for ordinary black and white work. Also features are required for color work that are non-essential for ordinary black and white reproduction.

Because color copy includes such varied subjects as oil paintings, pastel illustrations, open books, rugs, colored drawings and photographic prints, color transparencies, etc., and since the copy sizes may be of large or small dimensions, the copy holding facilities must be versatile and readily adaptable to meet all requirements.

SUMMARY

From the foregoing, it is evident that no definite distinction for the requirements of the many kinds of photography used in offset can be made. Critical requirements for black and white reproduction are just as diversified as are the requirements for fine color reproduction.

Some of the many copyholding devices in use are the following:

NON-TILTING

Open faced, wooden or metal; removable or stationary.

Open faced, vacuum model; immovable, stationary.

Simple glass covered model; stationary or removable.

REVERSIBLE

Wooden or metal, rotating model; movable.

TILTING GLASS COVERED

Felt covered, ply-board or composition back.

Spring supported pressure back, (floating type), ply-board.

Pneumatic bag, with a stiff or rigid wooden support.

Rubber blanket (vacuum model).

TILTING GLASS COVERED
(Convertible models)

Floating type, spring pressure back; replaceable with pneumatic bag.

Removable, floating type pressure back; replaceable with Levy positive-negative kit.

Spring pressure (floating type back); replaceable with bar and clamp holding assembly.

Spring pressure (floating type back); replaceable with circular rotating panel board.

(*To Be Continued*)

E. B. Co. Installations

A 22 in. by 34 in. E. B. Co. offset press has been installed at Huron Press, Inc., Chicago, according to an announcement by Harold W. Gegenheimer, Manager, Printing Machinery Div., Electric Boat Co. According to the announcement, E. B. Co. installations have also been made at the Bentill Press, Boston, and the U. S. Weather Bureau Printing Office, Washington, D. C.

Hot Melt Adhesive

A PERFECT binding operation which permits, it is claimed, speeds of 280 bound copies per min., with the trimming and packing being done right off the binder, has been announced by National Adhesives, 270 Madison Ave., New York 16, N. Y. The bookbinding technique employs a Resyn hot melt adhesive and a light-colored, flexible backbone for anchoring the pages of the book. Sponsor claims the adhesive has been developed for operating at high temperatures with little or no yuming and negligible odor.

The Adjustable Assembler Slide Stop—For Linotype machines eliminates the rideup of the assembler slide, states Linotype Parts Co., Inc., S. Hackensack, N. J. Sponsor also states the part affords a means of adjusting the assembler slide to the proper distance between the slide finger and the assembler star wheel. The wear of the buffer can be taken up by the adjusting screw at the bottom of the bracket.

A Decision That Creates *More Sales*

The demand for more pictures is the sign of an astute advertising manager. Pictures tell far more than words alone. Pictures tell a story that appeals to anyone with money to spend.

Catalogs and folders, instruction books, textbooks, as well as magazines and books that are designed for entertainment alone, all have provable, added value when words are brought to life through illustrations.

Good reproductions of illustrations make any printed material more attractive, more effective. And the Graphic Arts industry finds the high quality of Kodak photomechanical supplies a big help in the making of consistently good printing plates.

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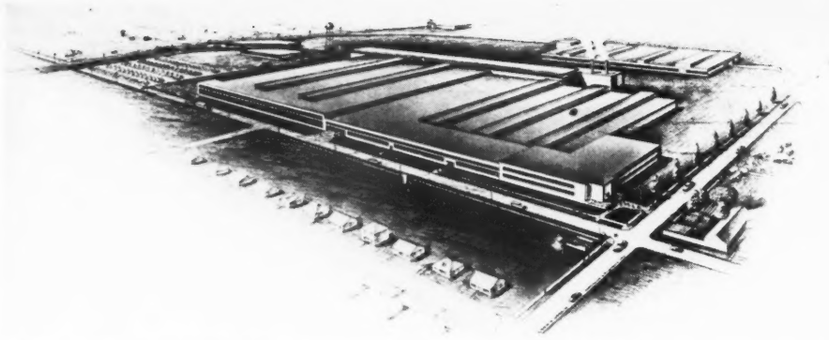
GRAPHIC ARTS DIVISION
ROCHESTER 4, N. Y.

Kodak
TRADE-MARK



Goss to Construct Modern Plant—Work will start immediately on the first unit of a $4 million plant in Cicero, Ill., for The Goss Printing Press Co., according to an announcement by R. C. Corlett, President of Goss. The modern plant will be built on a 20 A. tract at the southwest corner of S. 56th Ave. and W. 31st St. The first unit, with 200 thousand sq. ft. of floor space, will be one story in height and used for light machining operations and storage. When the entire building program is completed, it will consist of light and heavy machine shops, assembly areas, erecting bays and general offices. A parking space for about 400 cars will be provided.

Kansas Mechanical Conference 1951 Officers and Directors—Talk on the Intertype Fotosetter and the Linotype Blue Streak Comet highlighted the discussions of new equipment and improved methods of newspaper production at the recent Kansas Newspaper Mechanical Conference. Wichita, Kan., was chosen for the 1951 meeting. Officers and directors in the above photo are identified as follows: First row (left to right): Director, Warren Gresham, Ottawa *Herald;* Secretary-Treasurer, Larry Miller, Kansas Press Assoc.; Director, Harry Porter, Independence *Reporter;* Sixth District Director, Will Morton, Burr Oak *Herald.* Second row (left to right): Don Ridgway, Kansas Press Assoc.; Fourth District Director, Bill Lawrence, Wichita *Eagle;* Vice President, W. A. Blackburn, Herington *Advertiser-Times;* President, Glenn Cummins, Wichita *Eagle;* Director, Vern Williams, Topeka Newspaper Printing Co.; and Fifth District Director, Howard Wilson, Jetmore *Republican.* Not present in the picture is Director-at-Large, Bill Shute, Pittcraft Company, Pittsburg, Kan. The two-day Conference program included a number of departmental clinics which attracted considerable attention among the newspaper production and mechanical executives.

The Missouri Newspaper Mechanical Conference

At the recent Missouri Newspaper Mechanical Conference, the executive committee recommended that the place and date for the next annual meeting not be set, but that the conference attempt to work out a combined meeting with neighboring states for the next conference. Reports have been current that the conferences from Illinois, Nebraska, Missouri and South Dakota would be formed into a Mid-west regional conference. Proponents of the idea state that in this way more technical information can be passed along to a greater number of newspaper mechanical executives than were the state conferences to retain their separate identities.

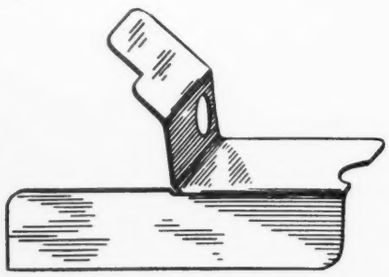
Officers elected at the meeting for 1950-51 are as follows: President, Earl Barker, Composing Room Supt., St. Louis *Star-Times*; Vice President, R. K. (Willie) Greene, Head Machinist, St. Louis *Post-Dispatch*; Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index*; and elective member to Board of Directors, Charles Behrens, Composing Room Foreman, Sedalia (Mo.) *Democrat.*

Lumitype is Trade-Marked

The International Lumitype Co., Boston, has notified *Printing Equipment Engineer* that it is the owner of the trade-mark name or word Lumitype, which can only be applied to that company's photocomposing machines and equipment. The use of this trade-mark on page 37 of our July issue as applied to another machine is erroneous.

Miller-Lauffer Sold

Hills-McCanna Co. announced at the Graphic Arts Exposition in Chicago the purchase of the Miller-Lauffer Printing Equipment Corp. The latter company will be known as the Miller-Lauffer Div., Hills-McCanna Co., and will maintain offices at 280 Lafayette St., New York 12, N. Y. The newly formed division is developing a small size envelope press which, the sponsor claims, will have speeds of 80 thousand to 104 thousand i.p.h.

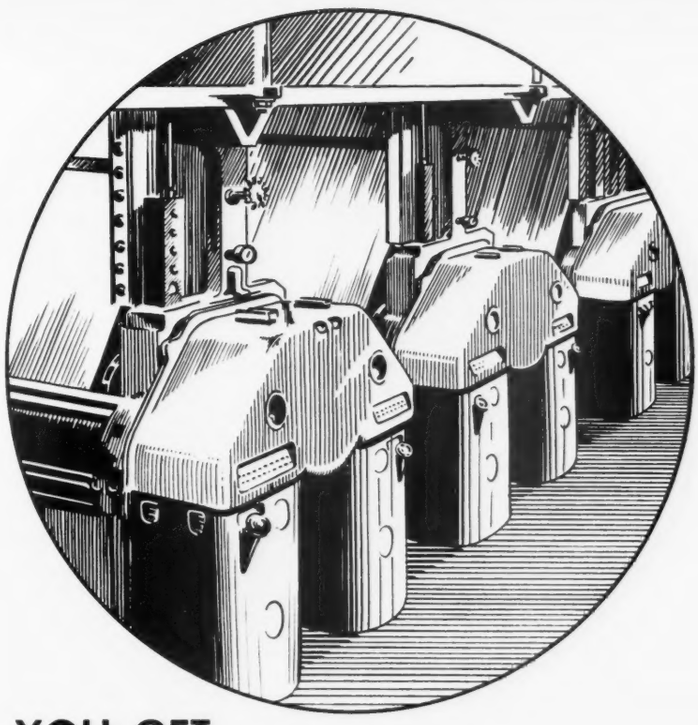


Griffith Control Lever Guard—A sheet metal stamping to cover the bearing point of the starting and stopping lever on line composing machines to prevent chips from accumulating and interfering with its operation has been developed by Linotype Parts Co., Inc., S. Hackensack, N. J. Known as the Griffith Control Lever Guard, sponsor states the removal of a screw and replacement of it with the guard is a 5 min. operation.

Corporation Changes Name

The name of Payne & Craig Corp. has been changed to the Ernest Payne Corp., according to a recent announcement. John Craig, former vice president of Payne & Craig, has resigned. Ernest Payne will continue as President of the company and announces that there will be no other personnel changes. The firm will continue as dealers in new and rebuilt printing machinery.

Ernest Payne, President of the Ernest Payne Corp., formerly known as the Payne & Craig Corp.



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An extremely durable clean printing laminated blanket.

"TINGUE" COATED FELT

The same durable coating as "COMBINO" affixed to a repressed felt blanket. For those who prefer a softer packing. Wool Felt also available uncoated in gauges .063 and .083.

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This drawsheet is firm, durable, economical and of long life.

GOLD TYMPAN

An old favorite for Flat Bed Presses. Skivered metallic surface accepts excess ink and flakes it off without smudging.

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CUSHION CORK*

Highly resilient and recommended as the underpacking for "COMBINO" or in combination with "FOUNDATION" Blanket or "TINGU-CORK" where a drawsheet is used.

TINGUCORK*

Much firmer than "CUSHION CORK" and preferred where precision plates are available as a companion blanket for "CUSHION CORK", "FOUNDATION" or "COMBINO."

FOUNDATION

A firm durable oilproof under packing laminated with "Neoprene" for use in combination with "CUSHION CORK", "TINGUCORK", and "TINGUE" Drawsheets or Felt.

KORKER*

Loses .006 to .008 during first 50,000 impressions and then holds at a constant level for the life of the blanket. Desirable for plants with older type presses, or, where an unfavorable mechanical condition exists.

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Patents

For The GRAPHIC ARTS

Covering patents issued August 1, August 8, August 15, August 22 and August 29.

Binding, Cutting, Perforation

During the five weeks covered by this report, no patents have been issued for this heading.

Composing Room Equipment

2,518,166. CARRIAGE CONTROL MECHANISM FOR PHOTOCOMPOSING APPARATUS. Invention relates to lithographic or offset printing and more particularly to the production of a photographic image of the finished composition to be printed without the use of hand-set or machine-set type. Justification of lines is accomplished by present apparatus. A carriage is movable along a fixed guideway and movement can be controlled. This is done by means comprising a fixed stop member and a continuous series of closely spaced movable stop members associated with the carriage and normally disposed in alignment with the fixed stop member. Means are provided for moving a preselected number to movable stop members out of alignment with the fixed stop member whereby the carriage is permitted to move a corresponding distance along the guideway. Invented by Maurice E. Miller, Addison, N. Y. Unassigned. Application September 17, 1946. 11 claims.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

2,520,474. MAKE-READY GAUGE USING SIMULATED PRINTING PRESSURE. A printer's gauge is provided with which mounted or unmounted cuts or plates may be accurately measured for make-ready before they are arranged as a part of a printing form. In a preferred embodiment, the measuring gauge is adapted for use on an imposing surface, which is a standard part of equipment, whereby an accurate and firm foundation is provided for measurements. In operation, pressure may be applied to the surface of the plates during measurement to eliminate errors which result when the plates and cuts are measured for height without pressure. Invented by Frank W. Shober, Pelham, N. Y. Unassigned. Application May 15, 1947. 3 claims.

2,520,837. SAW GAUGE is well adapted for use in printing establishments for the sawing of type plates. The saw table is provided with a gauge bar that may be adjusted to positions beyond the front edge of the table. In this structure the gauge bar has an auxiliary slide that is automatically extended to bar supporting position when the gauge bar is drawn forwardly beyond the forward edge of the table. Invented by Lee C. Hammond, Kalamazoo, Mich. Assigned to Hammond Machinery Builders, Inc., Kalamazoo, Mich. Application May 10, 1946. 3 claims.

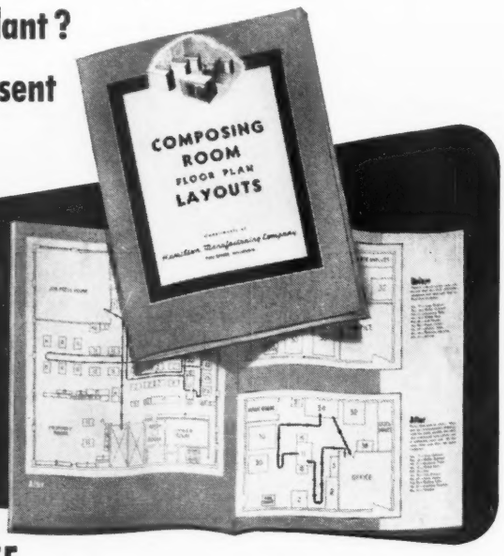
Feeding, Folding, Delivery

2,517,379. MULTIPLE SHEET DETECTOR MECHANISM FOR USE WITH SHEET-FEEDING APPARATUS. Sheet feeding apparatus is for use with printing presses. Invention provides a two-sheet caliper comprising a pivotally mounted lever extending, or arranged to extend, in the lengthwise direction of the layboard towards the front lays, and a gauge-piece (preferably a blade) carried by the lever and adapted to cooperate with the layboard, or a stationary part associated therewith, to form a gauge to pass a single sheet, but movable relative to the lever on engagement by an extra superimposed sheet or sheets, and arranged on such movement to cause the operation of trip mechanism to stop feeding of the sheets. Invented by Headley Townsend Backhouse, Wentworth, England. Unassigned. Application July 29, 1947; in Great Britain April 20, 1945. 1 claim.

2,517,388. SHEET MATERIAL HANDLING. Stacking apparatus comprises a framework, and an endless belt carried thereby. Means are provided for feeding successive sheets to be stacked to the underside of the belt. Jets of air are directed from beneath and longitudinally of the belt upwardly

Setting up a new plant?

Revamping your present plant for increased efficiency?



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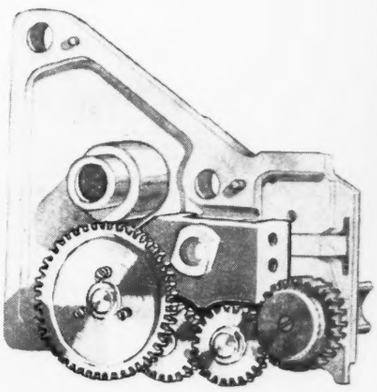
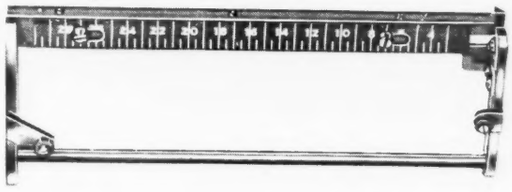


Showing how Cook Unit is attached to your Assembler Plate.

STAR EVERLASTING ADJUSTABLE ASSEMBLING ELEVATOR GATE



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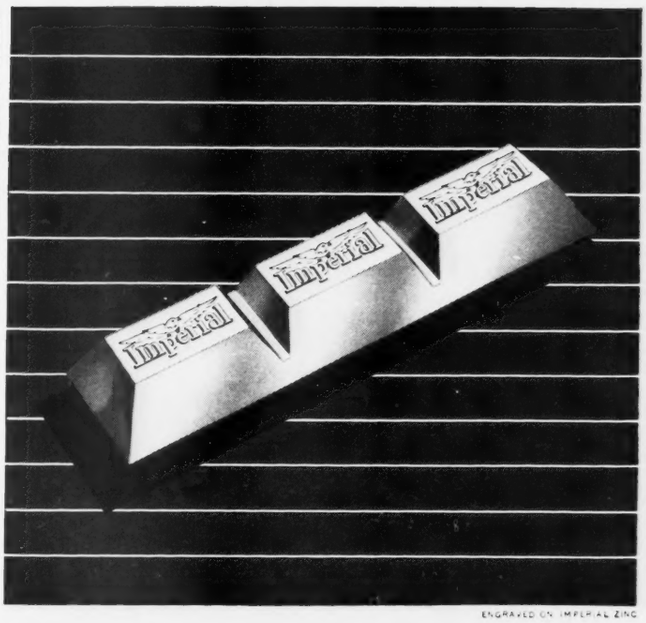

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Check Your Equipment and Supplies NOW

A CHECK on newspaper equipment and supplies in view of the present international situation is discussed and a preparedness check list provided in Mechanical Bulletin No. 423, issued August 30, 1950, by the American Newspaper Publishers Assoc. Sufficient inventories of spare and repair parts for essential machinery is urged by the ANPA for every newspaper. The check list, which includes every department, is designed to determine the present status of equipment and supplies pertinent to newspaper production. It is also stated in the bulletin that if a newspaper needs to replace obsolete equipment and can afford to do it, now is the time to decide. *Printing Equipment Engineer* does not regard the context of this bulletin as an attempt to encourage hoarding. Rather, in the bulletin it is advised that newspaper plants should not be "caught short" if a stringency should develop. Mostly, those plants which have been in the habit of too-close buying or those guilty of dalliance should put their equipment in good order for the long run should a serious emergency develop. Depending upon the article, orders should be placed so as to get shipment from three weeks to six months after an order is entered.

against the underside of each sheet to hold each sheet in floating contact with the belt. A valve member is actuated by each sheet to cut off the air jets to gravitationally release the sheet. Apparatus can be used in conjunction with a printing press. Invented by Howard W. Daves, Alcoa, Tenn. Assigned to Aluminum Co. of America, Pittsburgh. Application April 4, 1946. 9 claims.

Miscellaneous

2,518,834. METHOD OF APPLYING A SLEEVE TO A COATING AND INKING ROLLER consists in first securing a series of strings lengthwise along the roller. The sleeve is expanded until it is larger than the diameter of the roller and then it is slid over the roller. Release of the expanding means permits sleeve to contract and tighten on the roller. During the positioning of sleeve the roller is coated with a lubricant. Compressed air is admitted between sleeve and roller and the strings are pulled out to prevent air bubbles from forming between sleeve and roller. Roller is then ready for application to a printing press or the like. Invented by John G. Streckfus and Harry Godwin, Baltimore, Md. Unassigned. Application January 13, 1948. 2 claims.

2,520,252. REVERSING MECHANISM FOR SKIDS OF PAPER. Sheets of paper printed on only one side and stacked on skids may be reversed for refeeding with this device. The reversing mechanism is equipped with two sets of slidable lifting and holding fingers adapted to initially lift the pile of paper both at the top and bottom therof so as to hold the papers firmly in position during the turning movement. The turning device is mounted for rotation about a horizontal axis through an angle of 180 degrees so as to completely reverse the pile as a whole, after which the sets of lifting and holding fingers are separated and the pile lowered to a position where it may be carried by an ordinary transfer truck for further printing or folding. Invented by Grover C. Mutchler, Easton, Pa. Unassigned. Application August 1, 1946. 5 claims.

Plate Making

2,517,273. METHOD AND MEANS FOR DRYING AND SHRINKING MATRICES. The mechanism is housed in a cabinet resembling the mail receptacles used on city streets. It is for drying and shrinking of stereotype plates used for cylindrical newspaper presses. The device includes a vacuum chamber, a perforated matrix-supporting wall on the vacuum chamber and an air-exhausting blower connected to the chamber. Shutters interposed between the blower and the chamber may be interruptedly operated to cause interruptions in the passage of air from chamber to blower. This creates a rapidly pulsating vacuum pressure to be exerted on the matrix when the matrix is placed on perforated wall.

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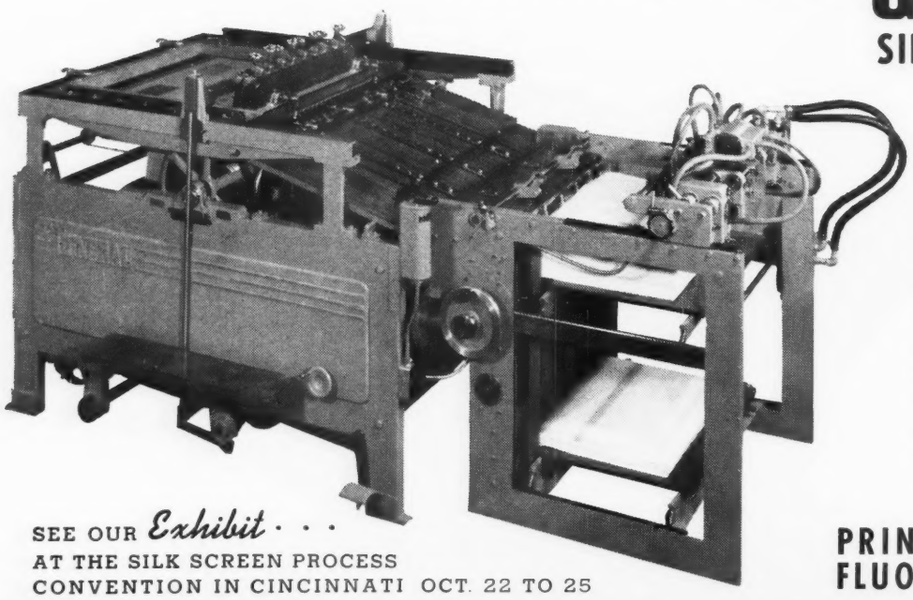

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PRINTS ALL THE NEW FLUORESCENT COLORS

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Infra-red lamps may be used as the heating source. Invented by Craig C. Baker, Los Angeles, Calif. Unassigned. Application June 25, 1946. 4 claims.

2,518,876. **A BASE FOR MOUNTING HALFTONE PRINTING PLATES** includes a grate made of a number of bars of pearwood or other nailable material. Each of the bars has a series of notches at its opposite side edges. Bars are connected to each other by the engagement of certain notches with each other. A solid block of cast material (lead) is arranged in the empty spaces of the grate including such notches. The main portions of the bars are embedded in the solid block. Invented by Max Fretz, Zurich, Switzerland. Unassigned. Application July 4, 1945; in Switzerland January 15, 1945. 12 claims.

2,519,609. **PHOTOENGRAVING LAMP CARRIER.** A support is provided for cameras for photoengraving, lithograph and other photo-mechanical reproductions, which will permit the lamps to be moved without shaking or distorting the camera bed and causing small inperfections in the focus of the camera. The camera has a frame-like bed rigid within itself, a copy holder movably carried by the bed, and a mono-rail supported below the bed and being free of same. A carriage rolls on the mono-rail, each end of the carriage having a pair of pivotable arms, each pair carrying a lamp holder. Loose-links connect the copy holder to the carriage for movement of the carriage on its mono-rail as the copy holder is moved on its bed. Invented by Max H. Sussin, Chicago, Ill. Assigned to Benjamin Sugarman, Chicago, Ill. Application September 30, 1946. 4 claims.

2,519,610. **FILM HOLDER FOR PHOTO-PROCESS CAMERAS.** This patent, a companion of 2,519,609 in this report, aims to overcome prior difficulties encountered in handling film on a vacuum board. It features a vertical frame hinged to camera body to swing about a vertical axis, a vacuum board being carried by the frame. Such board is movable to a horizontal position with respect to frame to receive a film. The board is hung from the frame by links pivoted below but near the center of gravity of vacuum board so that it partly counterbalances itself in a horizontal plane. The frame and board are provided with three plane-determining seats and have tapered means effective as the vacuum board nears the focal plane for forcing it to the plane determined by the seats. Invented by Max H. Sussin, Chicago, Ill. Assigned to Benjamin Sugarman, Chicago, Ill. Application September 30, 1946. 9 claims.

2,519,757. **GRAINING MACHINE** for printing plates comprises a base, a graining tub, and a set of three ball bearings arranged in triangular relation on the base to support the tub thereon for graining movements. A control frame between tub and base is mounted to slide in one direction on the base and has a sliding connection with the tub in a direction at right angles to the first direction and a rotary drive connection to the tub. Plates are yieldingly clamped in position while subjected to action of graining balls or marbles. Machine is a fully enclosed or cabinet type, and is particularly well adapted for airborne transportation as required by army service. Invented by Bernard R. Halpern, New York, N. Y. Assigned to Charles Zarkin, New York, N. Y. Application July 30, 1948. 7 claims.

2,519,809. **PRINTING PLATE COATING MACHINE** applies the sensitive coatings to printing plates and is known in the art as a "whirler". Invention provides a cover for such machines. Cover is made in three sections, namely, a narrow, normally stationary section affixed to the tub, an intermediate hinged section and a front hinged section. The double hinged parallel motion lid construction provides a maximum accessibility with a minimum of necessary overhead clearance. Rising horizontally, the front lid section does not require any additional overhead space above that required for the opening of the intermediate section. Whirlers may be located in places where it would be impossible to use the conventional one-piece hinged cover.. Invented by Charles Zarkin and Bernard R. Halpern, New York, N. Y. Assigned to said Zarkin. Application August 30, 1946. 9 claims.

2,520,201. **STEREOTYPE PLATE CASTING MACHINE** has slidable bars which carry dies to form recesses in the inner surface of a finished stereotype plate. The recess forming bars have inclined edges which cooperate with correspondingly inclined surfaces of grooves in the core of the casting machine forming a dovetailed joint, so that the bars may be moved longitudinally of the core, but cannot fall out. The bars are so connected to the casting machine that the finished plate and bars are first positioned

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along the core in delivering and thereafter movement of the bars is prohibited and movement of the plate is continued to place same in a removable position. Invented by Frank A. Foster, Melrose Park, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application November 15, 1946. 3 claims.

2,520,504. ELECTRIC PRINTING. Slidable bars on the core of the casting box in a stereotype plate casting machine carry dies to provide the proper recesses in the inner surface of the finished plate. The bars are formed with inclined edges to cooperate with correspondingly inclined surfaces of grooves in the core of the casting box to form a dovetail joint. Bars may be moved longitudinally of the core, but cannot fall out, in a radial direction, from their grooves. Bars are connected to the core for limited movement in their respective grooves, and are also connected to the collar of the casting mechanism which pushes the finished plate and bars along the core in delivering, and thereafter movement of the plate is continued to place the plate in position to be removed from the machine. Invented by William J. Hooper, Elsah, Ill. Assigned, by mesne assignments, to William C. Huebner, New York, N. Y. Application November 22, 1944. 18 claims.

Printing Inks

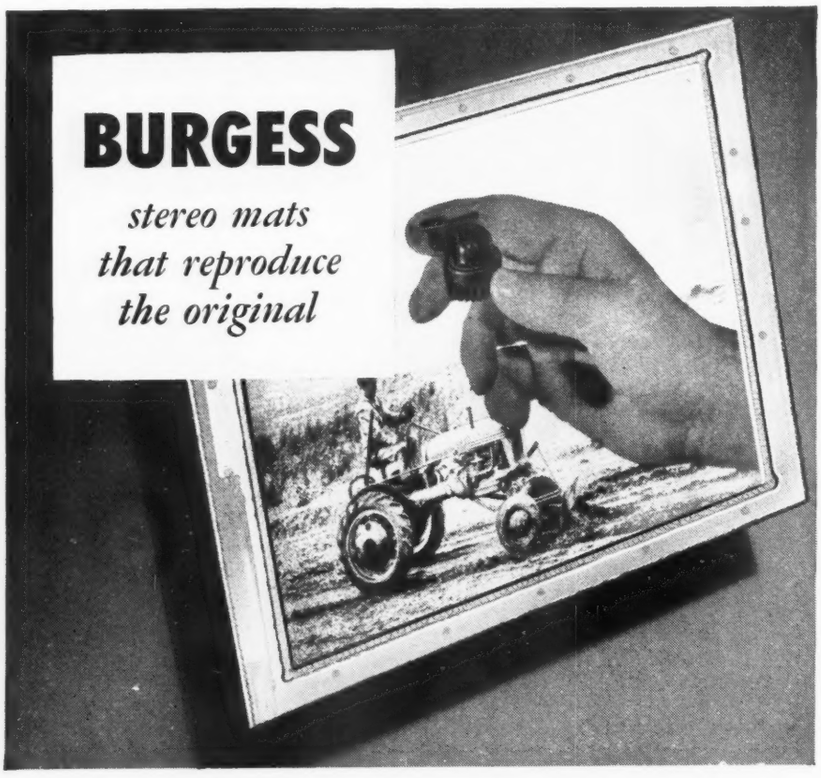
2,518,607. PRINTING INK AND METHOD OF PRINTING. It is claimed that the method of printing prevents offset. A printing ink made up of thermosetting, water-insoluble, glyceryl phthalate and an alkali metal salt thereof colloidally dispersed in a vehicle selected from the group consisting of water miscible liquid glycols, and polyglycol ethers of a pigment is used. Immediately after printing an aqueous solution of a salt of a metal selected from the group consisting of barium, calcium, and zinc is applied to the surface of the printed ink. Invented by Donald Robert Erickson, Kalamazoo, Mich. Unassigned. Application January 16, 1946. 7 claims.

Printing Presses and Equipment

2,516,941. ATTACHMENT FOR INK ROLLERS AND PRINTING MACHINES. A guard is provided for cooperation with the end of a partially submerged ink roller for preventing ink from gathering upon the end of the latter. The guard prevents transfer of such ink to the impression roller without having been acted upon by the spreading roller. A stationary plate contacts end of ink roller adjacent area of contact thereof with the ink sprading roller. This prevents the ink from being carried by the ink roller past its contact point with ink spreading roller. The guard is mounted on the shafts carrying the ink and ink spreading rollers. Invented by George Babicz, Chicago, Ill. Unassigned. Application October 18, 1946. 11 claims.

2,517,210. SYNCHRONOUS BED MOTION FOR PRINTING PRESSES. An object is to reduce the amount of parts, gears and weights to be used and to reduce all diagonal stresses to a minimum, all points of wear being in a straight line. In combination with a frame, there is a rectilinearly reciprocable member. Gears are provided for displacing the reciprocable member intermediate its extreme limits of movement and oppositely moving synchronously timed angularly oscillatable means for displacing the reciprocable member when the gears are inoperative. Each angularly oscillatable means has a slot receiving a part of the reciprocable member whereby the cross dimension of the mouth of each slot is enlargeable when said part of rectilinearly reciprocable member passes through same. Invented by Arthur J. Jenner, Chicago, Ill. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application February 26, 1946. 26 claims.

2,517,251. OPERATING MECHANISM FOR PRINTING PRESSES AND THE LIKE. The operator is particularly designed for printing presses having an oscillating bed. A long operator is carried by the bed and means coact with such operator to slow down, stop and reverse the bed at least one end. Such long operator may take the form of a rack and the means coacting with same may be a pinion meshing with same after the rack through which the bed is driven in constant speed motion has passed beyond the driving pinions coacting therewith. The two means may be operated simultaneously during a short portion of the movement of the bed to insure control of the bed at all times. Invented by Joseph Sinkovitz, Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., Pitts-



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burgh, Pa. Application February 1, 1946. 8 claims.

2,518,042. THE AUTOMATIC PAPER FEED CUTOFF is particularly for attachment to printing presses having one or more printing cylinders. The attachment comprises a magnet support adapted to be mounted on the press frame and supporting an electromagnet having a plunger bold slidably guided in the magnet and adapted when the magnet is energized to be withdrawn toward the magnet. A plunger rod slidably reciprocatorily guided transverse to the end of the bolt when retracted is connected to the rock shaft and adapted to be stopped by the bolt when not retracted thereby to stop the rock shaft. A switch box mounted under the path of printed sheets contains a normally closed switch comprising a contact and a leaf spring biased from the contact, and a feeler connected to the spring and adapted to be pressed beyond the plane of the printed sheets when no sheet is present, thereby to open the switch. Invented by Alfonso Martell, Bloomfield, N. J. Unassigned. Application May 13, 1947. 8 claims.

2,518,575. PRINTING MACHINE. The invention features a device under a single control for shifting the feed of a web from an expiring roll to a replacement roll without stopping or slowing down such high speed presses as are used for newspaper work. It takes the form of a rotatable reel adapted to support a number of web rolls and web guides including a floating roller running in a loop in the web in combination with endless belts, each carried on pulleys. Pulley supports rotate with the reel. In changing a feed, means are provided for first pressing the belts against the web rolls, and a further mechanism connected to a rotating member of the machine drives one of the pulleys carrying each belt; a variable speed device is associated with the second mechanism. A third device is operated in response to bodily movement of the floating roller to operate the variable speed device and thus regulate the tension on a web running to the machine. Invented by Anton Stobb, Union Township, Hunterdon County, N. J. Assigned to R. Hoe & Co., Inc., New York. Application February 23, 1946. 9 claims.

2,518,960. WEB SEVERING MECHANISM. Invention aims to regulate the operation of the cheek wood to eliminate noise in newspaper plants. It discloses, in the cutting couple of a printing press, a knife box, cheek woods on each side of a knife, spring means pressing the cheek woods outward from the box parallel to the knife and perpendicular to its cutting edge, cam followers on the cheek woods, and cams cooperating with the followers to regulate the travel of the cheek woods. Invented by Paul L. Tollison, North Plainfield, N. J., and Charles S. Caffrey, Port Washington, N. Y. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application March 9, 1946. 7 claims.

2,519,182. INK FOUNTAIN. Invention has reference to a printing ink fountain having a frame supportng a fountain blade with an edge adjacent a fountain roller and adjusting means associated with the frame for close adjustment of the spacing between the edge of the blade and the periphery of the roller. It discloses the combination therewith of a blade holder fitted to a seat on the frame and arranged to hold the blade, means to move the holder and blade forward on the frame into operating position relative to the roller and backward away from the roller, a lip on the holder, and a lip engaging surface on the frame arranged to engage the lip as the blade is moved backward. Invented by Edwin W. Goodwin, New Rochelle, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application October 9, 1945. 2 claims.

2,519,229. PRINTING PRESS INK FOUNTAIN. Removal of press ink from the ink fountains of printing presses is facilitated by the invention. The fountain has an overshot fountain roller and coacting regulating blade, together with means for rocking the fountain and blade bodily as a unit about the axis of the fountain roller for discharging the contents of the roller and without disturbing the adjusted setting of the blade with reference to the periphery of the roller. Swinging of the fountain is accomplished by a manual actuating mechanism. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to Goss Printing Press Co., Chicago, Ill. Application November 27, 1944. 11 claims.

2,520,230. PRINTING PRESS INK CONTROL MEANS. The control is for use with printing presses having a feed board for conveying paper to be printed from a stack of sheets to printing rollers and a pivotally mounted fountain lever arranged to be pi-

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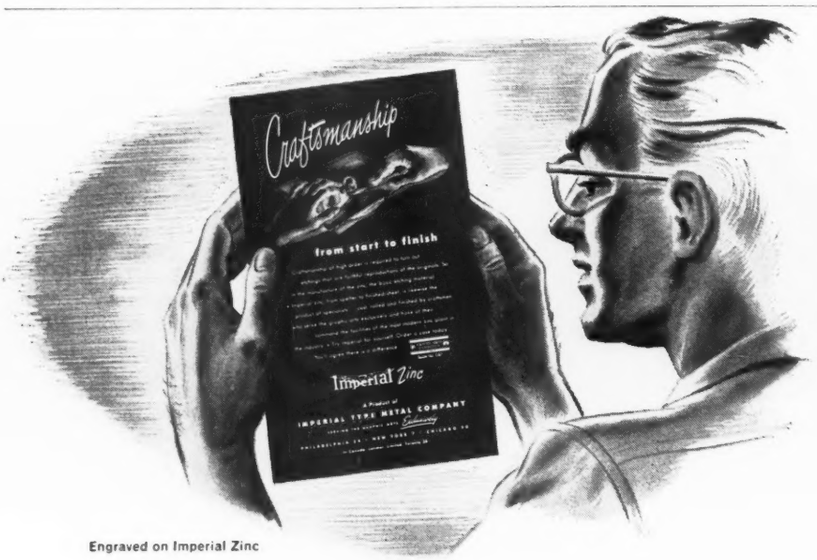
voted once for each operation of the feed board to control rotations of a fountain roller for inking the printing rollers. The fountain lever is held against pivoting to prevent inking the rollers when a sheet is improperly fed by a cam plate mounted on the side of the fountain lever to move with said lever when pivoted, a cylinder fixed on the press, a pin slidable through an end wall of cylinder to be extended into the path traversed by the cam plate, means for holding pin in an extended position from cylinder and pneumatic means controlled by proper positioning of a sheet on the feed board for holding pin retracted into cylinder against action of holder, allowing lever to pivot. Invented by Charles Weber, New York, N. Y., and Richard Bisgen, Springfield Gardens, N. Y. Unassigned. Application June 23, 1947. 5 claims.

2,520,466. GUIDES ARE FOR HOLDING THE EDGE OF A PIECE OF PAPER ON THE PLATEN of automatic and hand operated presses to effect good registry. They consist essentially of a horizontal portion and a downwardly-extending flange adapted to be gripped between the platen and a bail. A strip is slidably held on the horizontal portion and has guides at one end. Invented by Raymond Liona, Brooklyn, N. Y. Unassigned. Application August 16, 1946. 3 claims.

2,520,688. INK ROLLER VIBRATING MEANS. Invention discloses an oscillatable inking roller and an oscillator disk rotatable about an axis parallel to the inking roller. Disk is provided at its periphery with a pair of thrust surfaces which are formed in the disk on opposite sides of the median plane therof. Roller comprises a pair of collars disposed in opposing relation to the thrust surfaces of the disk. One of the collars is spring pressed toward its corresponding thrust surface on the disk, whereby the collars are resiliently urges toward both surfaces of the disk at all times. Invention is illustrated in connection with an inker in which a plurality of inking rollers are arranged around a drive gear which meshes with and drives a gear fixed on each of the rollers, the invention being particularly adapted to such an inker although not exclusively so. Invented by Henry F. Meyer and Charles W. Harrold, University Heights, O. Assigned to Harris-Seybold Co., Corp. of Del. Application February 12, 1946. 12 claims.



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EXECUTIVE Cs

Charles Cubbison, named Assistant General Plants Manager of the J. M. Huber Corp. Cubbison has been purchasing agent for Huber's Printing Ink Div. for the past 28 years. He will supervise production and purchasing, and analyze costs of manufacturing printing inks at Huber plants throughout the country. He is a graduate of the University of Kansas

Theodore Makarius, who recently joined the sales department of Pope and Gray, Inc., according to an announcement by W. G. Tatlock, Vice President. Makarius formerly was sales manager of Fuchs and Lang Mfg. Co., Div. of Sun Chemical Corp. Prior to this he was superintendent of the pressroom at Brett Litho Co., Long Island City, N. Y.

Fred W. Hoch, jr., recently joined the sales and service staff of the Lanston Monotype Machine Co., according to A. E. Giegengack, Executive Vice President. Hoch is a graduate of Rochester Institute of Technology and formerly was associated with the Intl. Typographic Composition Assoc. He is the son of Fred W. Hoch, President of Fred W. Hoch Associates.

Carl C. Sweet, General Plant Manager of C. B. Cottrell & Sons Co.'s Milwaukee Plant, recently elected Vice President of the company. Sweet has been associated with the Milwaukee plant for more than 25 years.

Joseph Cavanagh, appointed Assistant Purchasing Agent for the Printing Ink Div. of the J. M. Huber Corp. Cavanagh, a graduate of Fordham University, has been manager of the Huber Rotogravure Laboratory for the last two years. He formerly was vice president of the Cavanagh Chemical Corp. He will make his headquarters at Huber's New York office at 342 Madison Ave.

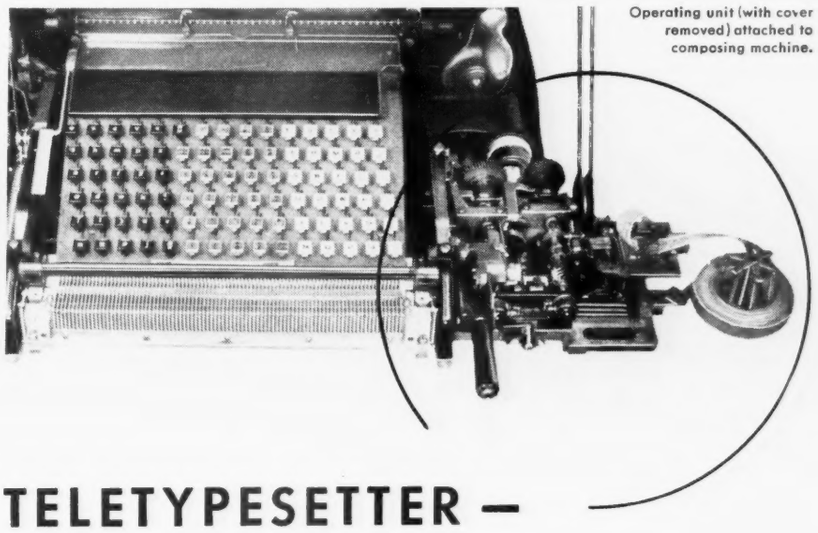
Albert J. Graf, recently elected Vice President of C. B. Cottrell & Sons Co. Graf is General Plant Manager of Cottrell's Westerly, R. I., plant. He was formerly associated with Lakeshore Engineering Co., R. Hoe & Co., and Goss Printing Press Co.

Announcement has been made of the appointment of Joseph F. Donnelly as New England Manager of The John Hewson Co. Mr. Donnelly was previously associated with E. I. Dupont De Nemours & Co. and the General Electric Co. He will make his headquarters at 156 Main St., Foxboro, Mass.

Joseph Van Cata, General Manager of the R. R. Robertson Co., has announced the appointment of William Clackworthy as resident representative in the New York area. Van Cata also stated that Edward Pollack, who has been representing Robertson in New York for the past year, is being transferred to the Chicago office where he will serve in both a sales and service capacity.

Prof. Homer E. Sterling has been appointed Chairman of the Printing Management Dept. faculty at Carnegie Institute of Technology, Dr. J. C. Warner, Carnegie President, has announced. Prof. Sterling has been a member of the Carnegie faculty since his graduation from the same college in 1926. He is the author of the book *Advertising Criteria* and a member of the American Institute of Graphic Arts, Typophiles and the Professional Photographic Assoc.

Henry J. Wagner is now Treasurer and General Manager of the Union Paper & Twine Co., Cleveland. He succeeds Harold S. (Pete) Frazier who passed away recently. Wagner's duties took effect about the middle part of August. He has been with Union Paper & Twine for 19 years. He is 39 years of age, is married, lives in Cleveland and has two sons.



Operating unit (with cover removed) attached to composing machine.

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The Teletypesetter Operating Unit pictured above which converts your composing machine to automatic operation, is driven directly from the composing machine's intermediate shaft. There are no electrical devices involved — no tubes, relays, or electrical circuits.

The Teletypesetter system, consisting of the Operating Unit and a Tape Perforator, has been designed to be rugged and simple in operation. There are no intricate gadgets to get out of order . . . nothing your mechanical department can't service in its regular routine. And the Operating Unit does not interfere with manual line casting if the latter is desired at any time.

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Comet Casts 12 Lines

(Continued from Page 64)

of 70 deg. instead of heretofore customary 37 deg. angle. This new angle provides speed of matrix release from the magazines within 2% of the efficiency of vertically positioned magazines.

In Teletypesetter operation, 530 matrix characters per min. are released from the magazine. This speed is needed to permit casting twelve 8 pt. 12-pica, slugs per min.

The two magazines are suspended on ball bearings and are held in position against their stops by a counterbalance spring, and a simple parallelogram linkage system is used to transmit the shifting motion. Shifting from one magazine to the other is accomplished by moving a lever at the right side of the magazine frame.

Instead of the usual geared motor, a standard $\frac{1}{2}$ h.p., 1725 r.p.m. motor is employed. It may be obtained from electrical supply houses, and is mounted on a bracket. On the end of the motor shaft is fastened a pulley for V belt extending to a V belt pulley on a countershaft. On the other end of the countershaft is mounted a pinion which meshes with the teeth in the machine driving pulley. Different speeds ranging from $5^2/_3$ to 12 lines per min. may be obtained by installing proper V belt, pulley and pinion.

All main cams have been re-engineered for smoothest operation at high speed. For instance, when the second elevator makes its pick-up and return strokes, the stroke is accelerated at starting position and is decelerated at seating position—the high speed of the stroke occurs between the seating positions. The same system is used in motions of the first elevator slide and the mold disk turning mechanism. Cam rollers for the various levers are retained in the redesigned high-speed machine.

One, two or four mold operations may be had as required. Ordinarily, two-mold operation is used for Teletypesetter operation by changing the mold-turning segment on the mold turning cam to permit alternate casting from two molds.

Electrical safeties are employed to prevent damage to machine parts. When the distributor stops for any reason, a microswitch is closed and the Teletypesetter keyboard operating unit is stopped. If the operator forgets to start the assembler matrix delivery belt, the Teletypesetter keyboard operating unit cannot be started. If the tape perforator operator composes too long a line (overset matrix line). This line is "held" in the assembling elevator and the keyboard operating unit is thrown out of operation. Just before the assembling elevator rises the assembler slide brak is freed to pull the assembled matrix line against the star wheel, to insure that the last matrix in the line will be positioned fully within the assembling elevator front and back pawls.

For continuous straight-matter composition of a fixed length, such as 12 picas, the metal pot mouthpiece jets are drilled only for the width of the 12 pica measure. The balance of the mouthpiece surface which ordinarily would contact the back of the mold is relieved so that only the 12 pica section of the mouthpiece contacts the mold.

Stig Cronström, recently appointed European Assistant to L. E. Pleninger, Vice President in Charge of Foreign Sales, American Type Founders Sales Corp. Cronström will have charge of the ATF European Service and will maintain his office in Stockholm, Sweden.

M. C. Larson, appointed Manager of Cutler-Hammer, Inc.'s, Baltimore sales office. Larson replaces R. A. Haworth, who has been appointed Dallas District Sales Manager for Cutler-Hammer. A graduate of the University of Minnesota, Larson has been associated with Cutler-Hammer since 1929.

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One Girl does the work of two with the NEW

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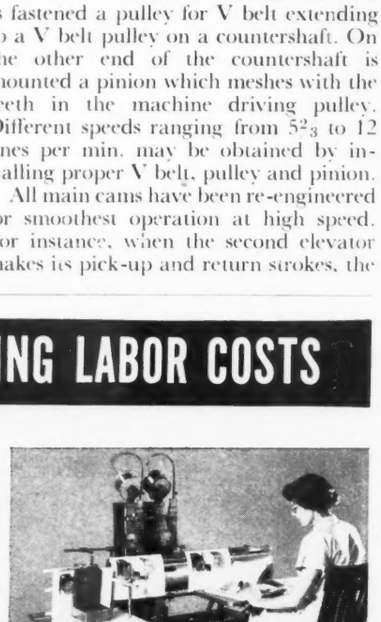

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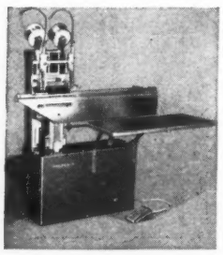
. . . a profit-maker for any printing plant

Here, at a price ANY plant or bindery can afford, is an automatic stitcher that gives twice the production with one operator that the same operator can obtain from a pedestal stitcher.

The new Rosback Auto-Stitcher has two standard Boston quarter-inch stitcher heads and will handle any saddle stitching job in folded sizes up to 10″ x 14″, in thicknesses up to $\frac{3}{16}$″ ($\frac{3}{8}$″ folded).

The Auto-Stitcher can be operated by anyone after a few moments of instruction—no special skill is required. Stitches (one or two) are placed mechanically and booklets are automatically ejected onto stacker delivery table. Speed is variable for from 12 to 36 books a minute, according to operator's skill and number of signatures she has to insert. Machine available with or without stacker delivery which may be added later, if desired. Without stacker, stitched books simply drop into a box placed at left side.



Rosback Auto-Stitcher without Stacker Delivery which is shown in upper illustration.

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New Cline Plant—Commencing November 1, Cline Electric Mfg. Co. will combine its various Chicago operating units and general office under one roof at 3405 West 47th St., Chicago. The new plant has a ground floor area of 120 thousand sq. ft. and space for general offices on the second floor. Additional area for expansion is also available.

Photographic Stains Booklet

IDENTIFICATION, prevention and removal of stains encountered in general photographic processing is the subject of the latest technical booklet to be issued by the Eastman Kodak Co. Entitled *Strains on Negatives and Prints*, the booklet describes methods of identifying stains by appearance, solubility and by stage of appearance in processing. Photographs showing different types of stains, several charts summarizing information on various types of stains, and a bibliography of additional reference material on the subject are also included in the 32 page booklet. It is available through Kodak dealers at 25 cents per copy.

Hills McCanna Bulletin

HILLS McCanna *Contributions to the Graphic Arts Industry* is the title of a four page bulletin which illustrates and describes magnesium alloy for foundry chases, mounting blocks, newspaper bases, printers furniture and engravers tongs. Made available by Hills McCanna Co., 3025 N. Western Ave., Chicago 18, Ill., the bulletin presents a chart for comparison in weight between type metal, brass, iron, aluminum and magnesium in lbs. per cu. ft. It is explained in the two color bulletin that magnesium base is available for mounting 11 pt. electrotypes, stereotypes, Ludlow slug height, 16 ga. halftones and zincs, Fairchild engravings, and rubber plastic plates. A brief history of Hills McCanna Co. appears on the back cover.

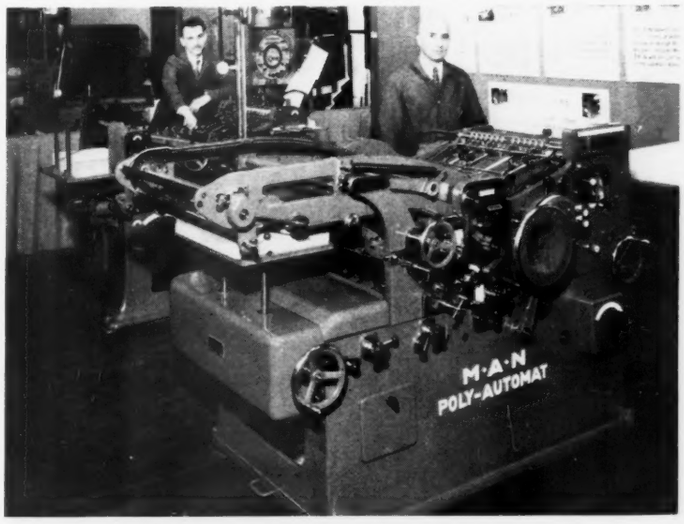
Press Blanket Catalog

AVAILABLE to the newspaper industry is an 8½ in. by 11 in. three-fold catalog containing actual sample swatches of newspaper press blankets and packings, issued by Vulcan Rubber Products, Inc., 58th St. & First Ave., Brooklyn 20, N. Y. Vulcan Pres. Blankets included are the No. 67 non-felt blanket with polished surface, No. 70 coated felt blanket for difficult press and mechanical conditions, No. 79 polished surface draw sheet for three-piece packing, and No. 77 draw sheet for three-piece packing combinations.

Samples of press packings included in the catalog are the No. 76 cork underpacking designed for two or three-piece packing, No. 63 foundation packing coated both sides for resistance to oil, and No. 62A synthetic blanket underpacking used in two or three-piece packings. Recommended combinations of impression cylinder packing are also listed embracing 20 types and gauges of blankets. A blanket and packing style and thickness chart is included also.

Fluorescent Lamp Guide

RELAMPING fluorescent lamp fixtures is a one-hand operation with a Edison Lok-Gyde, according to Edison Electrical Co., 355 Weybosset St., Providence 3, R. I. The combination safety guard and guide device is designed to guide fluorescent lamp terminal pins into the sockets and then locks the lamp in place to prevent it from falling out. To install the plastic device, the lamp is removed and a Lok-Gyde is slipped on each fluorescent socket.



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Made by M. A. N., Maschinenfabrik Augsburg Nuernberg A. G.

FEATURING:

- Chain delivery
- Four track bed
- Sheet slowdowns
- Automatic oiling
  Single shift lever
- Push button control
- Impression control
- Suction pile feede
- Double action pyramid ink system
- Self locking chases
- Roller bearings
- Two Revolution System

SPECIFICATIONS:

Maximum sheet size . . . . . 14¼ x 20½″
Maximum form on bed . . . . . 13 x 20½″
Maximum form in self locking chase . . . . . 13 x 19″
Power required . . . . . 3 HP

PHYSICAL DIMENSIONS:

Delivery / Frame / Locked — Length . . . . . 7′6″ Width . . . . . 4′
Height without spray gun . . . . . 4′
Height with chain delivery opened . . . . . 6′

FLOOR SPACE:

Delivery / Frame / Opened — Length . . . . . 9′5″
Width . . . . . 5′ 2½″
Weight . . . . . 4200 lbs.

SPEED: Infinitely variable between . . 1400-5000 I. P. H.

FOUNTAIN SPECIFICATIONS:

Interchangeable { 2 form rollers 2 distributor rollers / 1 ductor roller
3 vibrators 2 removable vibrators

HANDLES: 4½ Pound Manifold to 28 Pt. Board.

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Picture Taken at Executive Committee Luncheon—SNPA Mechanical Conference (Eastern Div.), Tutwiler Hotel, Birmingham, Ala., August 28-29.

Front row (left to right): Committee Members W. D. Jacobs, Mobile (Ala.) *Press-Register;* L. H. Pickens, Greenville (S. C.) *News-Piedmont,* Conference Chairman; and Luther Wright, New Orleans (La.) *Item.* Tom Tanner, SNPA Chattanooga.

Back row: Ray B. Crow, SNPA, Chattanooga, Tenn. Committee Members A. M. Brice, Miami (Fla.) *Dialy News;* Louis W. Devine, Anniston (Ala.) *Star;* W. L. Kinghton, Birmingham (Ala.) News Co., and W. C. Weaver, Atlanta (Ga.) *Journal.* Committee Member F. I. McDonald, Atlanta (Ga.) *Journal,* was not present when the picture was taken.

(Conference Story on Page 84)

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—It's the little things in Dry Mat reproduction that count—details—that's what we're talking about. BEVERIDGE Dry Mats will pick up those little details sharp and clean—and that goes for type faces. By faithfully reproducing every last detail, you get a clean cut casting and in turn a well printed paper.

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BOOTH'S Zink Cut Cement

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Prices: 75c per tube, $6.00 per dozen in the United States

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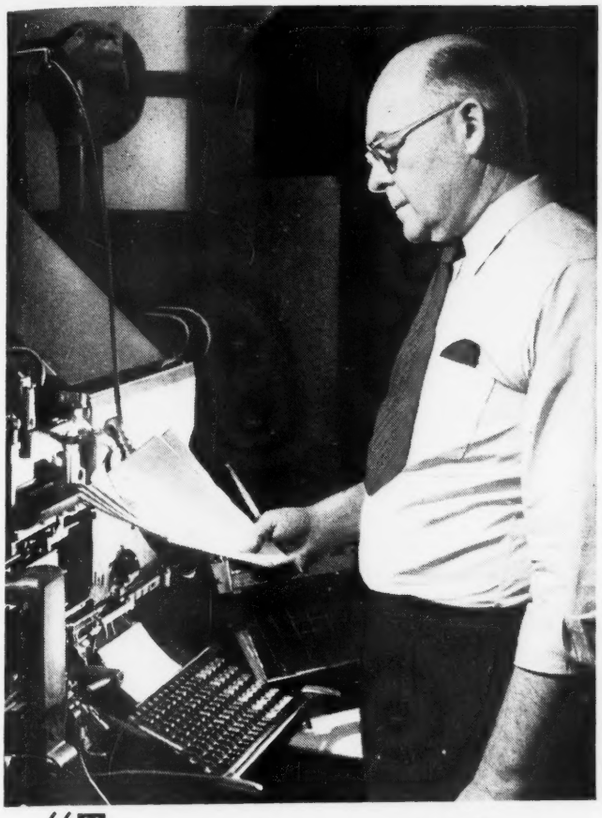
FOR Line Composing Machine Keyboards

Smoother, more responsive to keyboard cam action, higher resistance to glaze . . . with maximum cam gripping qualities, even diameter when properly applied to roll shaft. Try them.

Prices: $1.45 per pair $7.75 per dozen

E. A. BOOTH RUBBER CO.

2855 Scarboro Road • Cleveland Heights, Ohio



"To me as an operator, Blatchford's the buy because

. . . it melts smoothly—flows freely—molds sharply—sets quickly."

No question about it, Blatchford Metal has *everything* it takes to enable your operators to do the best possible job on their machines. And there are reasons for this—three good reasons.

Reason No. 1—the lead, tin, and antimony are top quality. Metal resources and research facilities unmatched in the field assure this.

Reason No. 2—these metals are precisely proportioned. No rule of thumb in Blatchford operations!

Reason No. 3—alloying operations are under rigid control—every batch of Blatchford reflects nearly 100 years of metal-mixing know-how.

Ask your operators—your make-up men and pressmen, too—what metal best fills the bill. Chances are they'll say, "Blatchford." Try it . . . you'll see why.

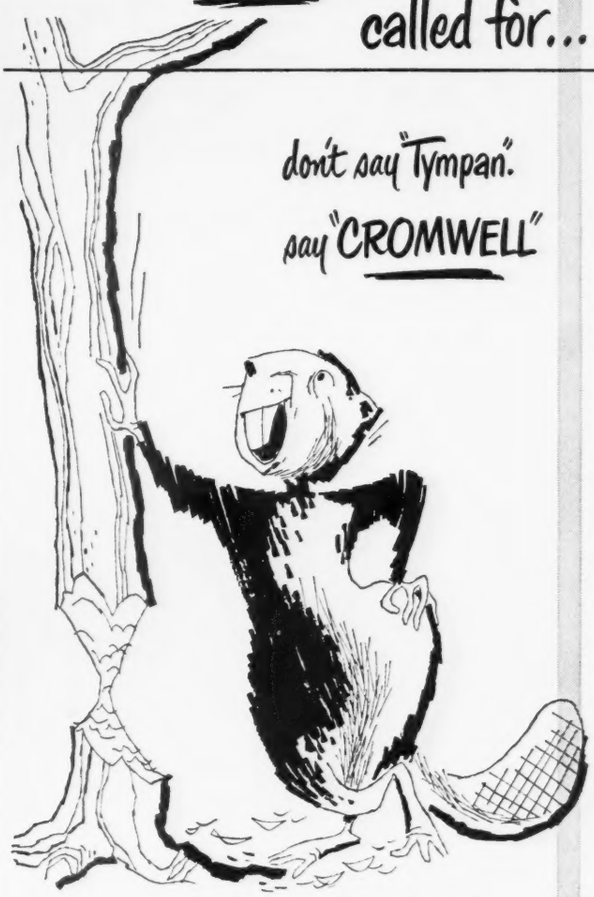
Keep your metal stock always up to par—use the famous *Blatchford Metal Maintenance Service.* Write for details.

NATIONAL LEAD COMPANY, *Atlanta, Baltimore, Chicago, Cincinnati, Cleveland, Pittsburgh, St. Louis; National Lead Co. of Mass., Boston; E. W. Blatchford Co., New York; Morris P. Kirk & Son, Inc., Los Angeles; American Lead Corp., Indianapolis.*

Blatchford . . .
the NATIONAL name for dependable metal

Makers of the famous Blatchford "Honeycomb" Base

when Good make-ready is called for...



With Cromwell Special Prepared Tympan, your make-ready troubles are over. It's *extra* hard. Every sheet is uniform throughout. Cromwell Tympan has amazingly high tensile strength and absolute resistance to oil, moisture and atmospheric changes. With Cromwell you get clean, sharp impressions every time. And it's UNCONDITIONALLY GUARANTEED!

Cromwell Paper Company
4801 South Whipple Street
Chicago 32, Illinois

I'd like to try Cromwell Tympan. Please send me a sample sheet. No obligation, of course.

Name .....

Firm Name .....

Address .....

City ..... Zone ..... State .....

Press Make ..... Top Sheet Size .....

(check)—Square cut ☐ Clipped, scored ☐

Try Cromwell Yourself! Fill Out This Coupon For a FREE Working Sample—

CROMWELL PAPER COMPANY
4801-39 South Whipple Street, Chicago 32, Illinois

SNPA (Eastern Div.) Conference Held in Birmingham, Ala.

(*Picture on Page 82*)

IMPROVEMENT of present production methods was the keynote of the S.N.P.A. Mechanical Conference (Eastern Div.) held at the Tutwiler Hotel, Birmingham, Ala., August 28 and 29. The 290 delegates and guests who attended the conference were welcomed at the opening session by Harry B. Bradley, Business Mgr., Birmingham News Co. Speaking briefly on the rising cost of newspaper production, Mr. Bradley told the delegates that if anything is to be done about prohibitive production costs, it must come out of meetings such as their mechanical conference. The delegates were invited to inspect the Birmingham News Co.'s new mechanical plant, which is now near completion.

Discusses ANPA Research

Highlight of the conference was a talk on newspaper mechanical research by Vernon R. Spitaleri, Manager of the ANPA Mechanical Dept. Stressing the need for takingg the uesswork out of present mechanical methods, Mr. Spitaleri described a number of projects developed by the ANPA Research laboratory, using slides to illustrate his talk. Among the new developments described were a fast-etching abrasive; a gauge for measuring bite, size and shape of dots in photoengravings; a line-composing slug gauge; and a stereotype plastic molding blanket.

Executive Committee

The conference chairman was L. H. Pickens, Mechanical Supt., Greenville (S.C.) *News-Piedmont*. Mr. Pickens was re-elected chairman of the conference for 1951.

New members elected to the Executive Committee for three-year terms, beginning in 1951, were Welch M. Bostick, Charlotte (N.C.) *News*; W. M. Hardwick, Memphis (Tenn.) *Press-Scimitar*; Warren L. Schrieffer, New Orleans (La.) *Times-Picayune*; tand Littleton S. Vaughan, West Palm Beach (Fla.) *Palm Beach Post-Times*.

Members of the 1950 Executive Committee whose terms expired this year were Luther Wright, New Orleans (La.) *Item*; A. M. Brice, Miami (Fla.) *Daily News*; and S. K. Trunnell, formerly with the Roanoke (Va.) Times-World Corp. Members of the 1950 committee whose terms continue were F. I. McDonald, Atlanta (Ga.) *Journal*; Louis W. Devine, Anniston (Ala.) *Star*; W. D. Jacobs, Mobile (Ala.) *Press-Register*; W. C. Weaver, Atlanta (Ga.) *Journal*; and W. L. Knighton, Birmingham (Ala.) News Co.

Machinists Meet

A special meeting of machinists was held on Sunday evening, August 27. The program for this meeting included the showing of slides by Linotype and Intertype representatives; a talk on the casting mechanism by W. T. Slusher, Roanoke (Va.) *Times*; a talk on the distribution system by Eddie Acuff, Knoxville (Tenn.) *Journal*; a discussion of the assembling mechanism; and a general discussion of maintenance routines of all composing room equipment. The topic leader for the machinist discussions was W. D. Jacobs, Mobile (Ala.) *Press-Register*.

Mailers' Session

The mailer group also held a special meeting on Sunday evening, which was followed by a film showing the Sheridan Stuffing Machine. The topic leader for the mailers was George Lawrence, Birmingham News Co.

Topic Leaders

Topic leaders for other departments during the general sessions were: Composing Room—F. I. McDonald, Atlanta, (Ga.) *Journal*; Pressroom—R. R. Fulton, Roanoke (Va.) *Times* & *World-News*; Stereotype Dept.—Jesse L. Sharpe, sr., Nashville (Tenn.) Newspaper Printing Corp.; Engraving Department — Ken Miles, Greenville (S.C.) *News-Piedmont*;

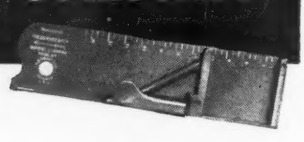
IN 35 SECONDS a Rouse Band Saw cuts a full galley of slugs **to variable measure**—automatically, accurately. No gauge setting is required —no clamping—no measuring! Slugs feed mechanically **at uniform speed.**

Teamed up with a type-setting machine, a Rouse Band Saw does the work of hours in minutes. It cuts sluglines for all types of composition that require frequent changes of line measure.

MITERING MACHINES
COMPOSING STICKS
SLUG CLIPPERS
BAND SAWS
LEAD AND RULE CUTTERS
TYPE GAUGES

Write today for illustrated folder on this and other Rouse time-saving printers' equipment.

H. B. ROUSE & COMPANY
2214 North Wayne Avenue
Chicago 14, Illinois



For greater accuracy—specify Rouse Composing Sticks. An investment in Rouse equipment pays a handsome profit.

"50 Years of Service to the Printing Industry"

"there ought to be a law"

WAKEFIELD NEWS SHOP
ALBERT BERLIN, PROPRIETOR
WAKEFIELD, KANSAS

July 7, 1950

Dear Sirs:

"There ought to be a law" (you oft heard that statement, no doubt) requiring every printer to buy at least one set of "Hi-Speed" Quoins and at least TWO keys for same.

I am frankly against half the laws now existent — BUT I am tickled pink that a salesman SOLD me last winter on a set of "Hi-Speed" Quoins, but where he fell down was selling me only ONE key!

So, take that as a suggestion in your sales talks. Buy TWO keys, for I find the key is always "at the other place" when I go to lock up a form.

Really and truly, I would hate awfully to get along again with just the ordinary style of quoins, and worry all the time whether they'll hold out until the job is completed. Now when I lock up a set of "Hi-Speeds" I KNOW they're O.K. until I unlock them.

No doubt about it — THEY ARE HIGH PRICED, and I almost returned my set after using them just once. But your dealer told me to return them for credit if not pleased. I was on the verge of doing so, then decided to use them once more. After that they couldn't have taken them away.

Assuring you that this letter is written in all sincerity, and with full approval to quote me, if you like, I am,

Sincerely,

Albert Berlin

Read what ALBERT BERLIN says about Challenge HI-SPEED QUOINS

. . . he says every printer should "buy at least one set of Hi-Speed Quoins and at least *two* keys" — one for the stone and one for the press.

Maybe he should have suggested more than one set of Hi-Speeds because another printer once said, "I can see now that there is going to be an argument about who is going to use the Hi-Speed Quoins unless enough are provided to handle every form."

Such enthusiastic approval is the rule — not the exception. Let us prove it to *you*. 654

THE CHALLENGE MACHINERY CO.

Office, Factories, and Showroom: Grand Haven, Mich.

DEALERS IN ALL PRINCIPAL CITIES

Over 50 Years in Service of the Graphic Arts

TRADE MARK ®

NONE DOES THE JOB LIKE

Perfection

TELETYPESETTER TAPE

The World's Leading Brand of Communication Papers.

Send for this free descriptive booklet containing samples of Perfection Communication Papers.

Perfection IS YOUR PROTECTION

PAPER MANUFACTURERS COMPANY

Philadelphia 23 Pennsylvania

Color Printing Control

with

PHOTOVOLT Reflection Meter Mod. 610

A photoelectric instrument for color and tone measurements in press rooms... for color as well as solid and half-tone blacks ...for control of ink flow ... for standardization of ink color.

PORTABLE, RUGGED, SIMPLE TO OPERATE

Write for Bulletin No. 639 to

PHOTOVOLT CORP.

95 Madison Avenue New York 16, N. Y.

35 YEARS EXPERIENCE Designing

- Newspaper and
- Printing Plants
- New Plants
- Remodeling
- Production Studies
- Survey and Reports
- Materials Handling

Morton L. Pereira

and Associates

Engineers and Architects

100 West Monroe Bldg., Chicago 3, Ill.

AMERICA'S LEADING NEWSPAPERS USE VULCAN Press Blankets

Continuous research has made VULCAN Blankets the outstanding press packing in Newspaperdom.

Let us show you what VULCAN Press Blankets can do for you—under your own pressroom conditions.

"THE MARK OF QUALITY"

Vulcan

RUBBER PRODUCTS, INC.

Formerly VULCAN PROOFING COMPANY

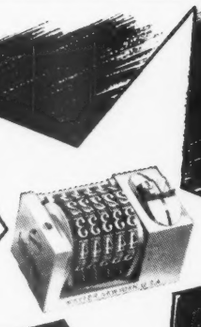
FIRST AVENUE & 58th STREET, BROOKLYN 20, N. Y.

Chicago Office: 333 North Michigan Avenue, Chicago 1, Illinois

Pacific Coast Representative: THE CALIFORNIA INK COMPANY, INC.

Canadian Representative: SEARS LIMITED, TORONTO

POSITIVE ACCURACY



Thanks to WETTER engineering skill

It takes precision engineering—*Wetter* engineering—to design a machine that will print each number in an ever-changing series perfectly! Easy-to-install skipping and repeat action wheels enable Wetter numbering machines to print in any order you wish—backwards or forwards, odd numbers, even numbers, or multiples... duplicates, triplicates, quadruplicates, etc. . . . 10, 20, 50, or 100 impressions before changing to the next number . . . consecutively to 50 or 100 and then repeat.

A completely equipped and staffed Wetter Engineering Department is ready to give you the right answers to your numbering problem. Write for further information.

Number it better with a Wetter

WETTER

NUMBERING MACHINE CO.

Atlantic Ave. & Logan St. • Brooklyn 8, N. Y.

Sold by All Dealers and Branches

A. T. F. INCORPORATED

and for the Smaller Newspapers—B. W. Phelps, Florence (Ala.) *Times*.

Representing the SNPA at the conference were Tom Tanner and Ray B. Crow, the latter serving as conference secretary.

Executive Actions

The conference body voted down a proposal that future conferences be held in January rather than in August. A resolution was approved empowering the Executive Committee to arrange a program for the 1951 conference to add separate meetings for the different crafts, but retaining the regular general sessions.

The Executive Committee voted to increase its number from 9 to 12 members, in order to give wider representation on the committee. This increase is to be accomplished over the next three years by adding four new members to replace the three members whose terms expire each year.

Manufacturer and Supplier Banquet

Robert E. Steel, American Type Founders, was chairman of the Equipment and Supply Group, which sponsored a banquet and entertainment on Monday evening for all delegates and guests. This group also sponsored a luncheon and tour for lady guests on Tuesday. Harry L. Leyland of Wm. C. Herrick Ink Co. was elected chairman of the Supply and Equipment Group for 1951.

Exhibitors

Supply and equipment exhibitors at the conference were Fairchild Camera and Instrument Corp., Hi-Speed Roller Co., Imperial Type Metal Co., Linotype Parts Co., Inc., The Morrison Co., H. B. Rouse & Co., Vulcan Proofing Co., and Western Newspaper Union.

Visit New Paper Mill

At the invitation of the Coosa River Newsprint Co., a number of conference delegates went on a conducted tour of the new $32 million newsprint plant at Coosa Pines, Ala., on Wednesday following the conference. This mill, which is the second newsprint mill to be established in the South, went into operation January 1 of this year and is now producing 100 thousand T. of newsprint per annum. It is said to be the only newsprint mill in North America controlled by newspapers, there being 128 newspaper stockholders.

Triplemetal Bulletin

COMPARISON tests and examples of halftone work are included in a six page bulletin on Triplemetal, issued by Edes Mfg. Co., Plymouth, Mass. The company claims that on press runs of up to 100 thousand impressions, Triplemetal shows no appreciable wear. Information on register work, color jobs, matrix pressure and etching Triplemetal is also included in the bulletin.

*Read HOW AMAZED NEWSPAPER PUBLISHERS SAVE 40% TO 60% ON FUEL— GET 66% FASTER HEATING!

WHETHER your mechanical plant is small or large . . . no matter how many press runs you make a day . . . now you can slash melting costs to rock bottom! Many newspapers report amazing savings* of from 50% to 60% on fuel, heat-up in ⅓ the time with Kemp Immersion Pots! In addition Kemp assures even melting, constant temperatures.

PAYS FOR ITSELF

Even if your melting equipment is large enough for the job . . . when you replace with Kemp you're money ahead. No brickwork to steal heat . . . no external combustion chamber . . . no carbon monoxide . . . no temperature overrun. You get *high casting and melting rates*, reduced dross formation, speed of temperature recovery after adding cold pigs . . . PLUS a *guaranteed 40% saving on fuel alone!*

FOOLPROOF OPERATION

The famous Kemp Carburetor . . . part of each installation . . . assures complete combustion, reduces installation costs, makes *your* unit profitable. Get the facts. Find out how much you can save. Fill out the coupon and send for special bulletin. *names on request

KEMP OF BALTIMORE IMMERSION MELTING POTS

CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

THE C. M. KEMP MFG. CO., Dept. L-10,
405 E. Oliver St., Baltimore 2, Md.
Gentlemen: Send me Information Bulletin IE-10.

Name .....
Company .....
Address .....
City .....Zone ..... State .....

Printers Line Gauges

FRONT and back illustrations of various printers line gauges in flexible stainless steel appear in a bulletin available from Arthur H. Gaebel, Inc., Larchmont, N. Y. Included among the selection is the Double Gauge with the inch, 6 and 12 pt., and agate scales; Double Face Printers Gauge with 6 and 12 pt., 10 pt., and 8 pt. scales; and 100 Liner Combination Gauge and Make-up Rule notched at 100 agate for measuring long columns in 100 multiples. Also illustrated in the 48 in. long Compositor's Type Tape with the pica and agate scale at top and inch scale at bottom; the 72 in. long Lithographers Featherweight Steel Type in plastic case, graduated in inches only; and the Newspaper Publishers Rule with agate lines on both sides, picas on the front and inches on the back.

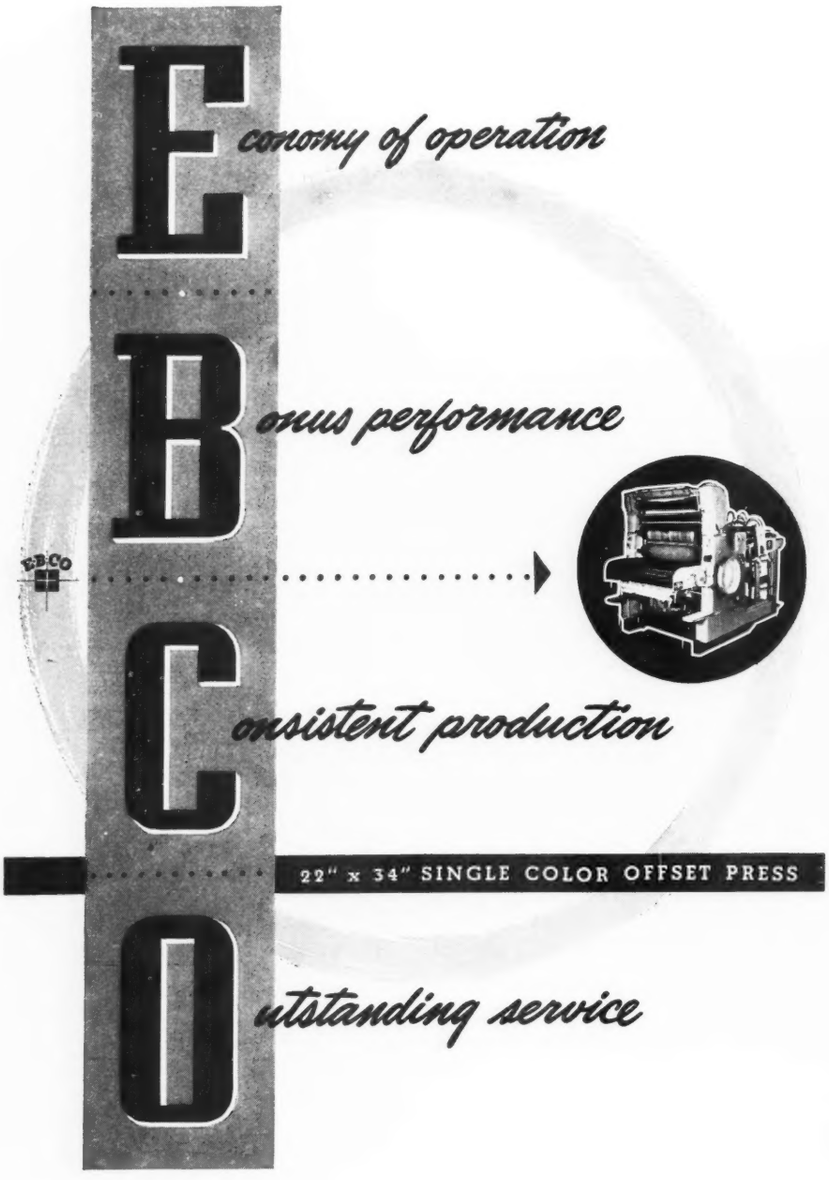
Numbering Machine Catalog

HAND numbering machines and automatic electric numbering machines, daters, cost recorders and time stamps, are among the many items illustrated and described in a 24 page catalog by Roberts Numbering Machine Co., 700 Jamaica Ave., Brooklyn 8, N. Y. Included also in the catalog are sections on numbering machine accessories, figure selection charts, parts lists, Rapidprint strike down stamps and Rapidprint accessories.

Motor Bulletin

ANOTHER bulletin, in the new Star series, No. B301, in which is described Wound-Rotor Induction Motors, has been issued by Star-Kimble, Motor Div., Miehle Printing Press & Mfg. Co., Bloomfield, N. J. Illustrated, this bulletin contains construction, assembly and application data for these motors, which are available in NEMA frames 203-505.

C. S. Allen has been appointed General Manager of the Star-Kimble Motor Div. of Miehle Printing Press and Mfg. Co., according to J. E. Eddy, President of Miehle. Allen was previously vice president and general manager of the A. O. Smith Electrical Mfg. Co. Prior to this association he was with the General Electric Co. for 16 years. He is an alumnus of Mississippi State College.



PRINTING MACHINERY DIVISION • ELECTRIC BOAT COMPANY

445 PARK AVENUE, NEW YORK 22, NEW YORK • 120 SO. LASALLE STREET, CHICAGO 3, ILL.

SALES REPRESENTATIVES: WILLIAM M. KEMP CO., SAN FRANCISCO 11, CALIFORNIA

A. E. HEINSOHN CO., PRINTING MACHINERY and SUPPLIES, DENVER 2, COLORADO

Craftsmen

(Continued from Page 55)

sirable, to join the International in order to maintain their competitive status. No locality, he continued, can surround itself in complacency, especially in this fast moving period of technological advance.

Winkler told the assembled Craftsmen that they "have a national stake in the business of printing." The effectiveness of their work and the money received for it depends on the general status of printing and publishing as an important part of the business process and as a part of our social scheme.

If lack of information or misconceptions about printing are corrected and the prestige of printing is raised to an even higher plane in the public eye, it automatically becomes more effective for business purposes, he said. Poorly planned printing, poorly executed printing, delayed production, and excessive costs could quickly discourage the use of printing except when necessary. Buyers would quickly shift orders from inefficient and costly printing centers.

Amadeo Tommasini, Chairman of the Public Relations Commission, followed on the program with a talk on *International Printing Week*. From a study made by the commission concerning International Printing Week, Tommasini revealed the following figures: 67 per cent of all local Craftsmen's clubs celebrated the event in 1950; 72 per cent plan to participate in 1951; 25 per cent are undecided, and 3 per cent, or one club, will not join in the celebration.

"Printing Week", he continued, "must not consist of gatherings of printers who slap each other on the back and remark, 'What fine fellows we are. We make the world go around. We are the backbone of civilization!' Printing Week is the one time during the whole year that everyone in the Graphic Arts industry must cooperate to impress upon the general

PRINTING FRAMES

LAYOUT TABLES

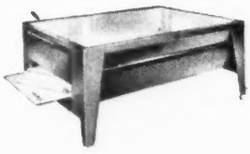
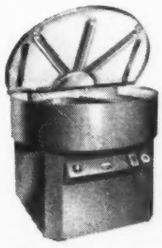


PLATE WHIRLERS



Clean, easy-to-work design is incorporated in each of the three pieces of equipment shown here. Controls are within easy reach of the operator for the utmost ease of operation. The smooth clean lines in the design of each piece of equipment makes it easier to keep the plate room clean and free of dust than ever before.

Nearly a half century of experience in the design and manufacture of the finest plate making equipment is behind every piece bearing the Robertson name plate. For the best result, give your workmen the best equipment . . . Robertson.

Send for complete catalog No. 50.

EFFICIENT DESIGN makes for more EFFICIENT OPERATION!

ROBERTSON RELIABLE REPRODUCTION EQUIPMENT

R. R. ROBERTSON CO.
3067-79 N. ELSTON AVE.
CHICAGO 18, ILLINOIS

"HONESTLY," *said the Circulation Manager,"it's like a* CLOCK"

"When I came to this paper five months ago," he continued, "I had been used to fighting the mechanical departments to get me papers regularly and on time. When I started to get tough here, they looked surprised and said, 'of course you will get the Home at 1:50 and the Stock at 3:15'. . . And that is what it has been every single day. I can make plans for new territories with support like that . . . Another case where Certified uniformity was making things easier all around."

For dependable stereotyping, rely on Certified Mats Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

NOTICE!

WITH APOLOGIES

THE CONTINUED RISE IN THE COST of producing our press packing materials has reached the point where we find it impossible to further absorb the shock.

THEREFORE—IT IS WITH CONSIDERABLE RELUCTANCE that we find it necessary to announce that as of Sept. 15, 1950, prices on our complete line of Blankets and Tympan Materials will be raised **15%**.

AT THIS SAME TIME WE SHALL PUT INTO EFFECT a new pricing policy on our MONOCORK. **From Sept. 15, the price of any blanket—regardless of gauge, and within the sizes from 33 x 45 inches to 39 x 50 inches, will be $17.00.** Odd sizes or shapes will continue priced on area. We expect to arrange the same system for all types of material soon.

NEW ENGLAND NEWSPAPER SUPPLY CO.

164 FREMONT STREET
WORCESTER MASSACHUSETTS
BRANCHES: New York—Chicago—San Francisco—Tulsa

Marks 25 Years With Miehle Paul E. Twyman, Assistant Sales Manager of the Miehle Printing Press and Mfg. Co., who observed his 25th anniversary with the company recently. Twyman came to Miehle after years in government service, first in the Engineer Corps, U. S. War Department and later as Assistant and Acting Director of the U. S. Bureau of Engraving and Printing.

public the importance of our industry to the general welfare and advancement of civilization."

Planning the Educational Program was the subject of a talk delivered by Thomas P. Mahoney, Chairman of the Intl. Technical Commission. Offering suggestions for the program chairman of the local club in planning monthly educational meetings, Mahoney stated that though it is desirable to invite out of town men to have a balanced program, it is surprising how many interesting speakers each club has right in its own membership.

Mahoney offered the following subjects as a 10 meeting educational program: Offset in a printing plant, workflow in a job plant, safety for employees, press rollers, carton plant visit, typography with movie, photoengraving, electrotyping, advertising agency speaker and web offset. Another program might consist of: color separation for offset, paper mill visit, personnel, presswork, ink, work simplification, embossing and die cutting, quiz night, planning production and an engraving plant visit.

Frank Bartojay, President-Elect of the Chicago Club of Printing House Craftsmen and former editor of *The Chicago Craftsman*, delivered an address entitled *Qualifications of a Good Editor for the Club Bulletin*. Bartojay stated that a good editor must be a layout man and type expert, feature writer, advertising genius, production man, diplomat, and capable of editing copy in a scholarly fashion. Admitting there were few men who possessed all of these qualifications, he suggested that the editor delegate the various duties necessary to prepare and produce a good club bulletin to members who excel in one or more of these requirements.

Bartojay listed the most important function of the club bulletin as announcing and publicizing the next educational meeting. He said to be sure the contents of the bulletin has a good amount of copy on the members' activities. Well written articles on the last meeting, social functions, conferences or conventions, are always good reading and aid in stimulating and retaining interest in the club.

Copy Preparation Clinic

PRESIDING chairman of the Copy Preparation Clinic on Wednesday morning was J. Homer Winkler, Intl. Second Vice President. The program was started with a talk entitled *Preparing Art Copy* delivered by Clint Conrad, Vice President of Vogue-Wright Studios, Inc., Chicago. Conrad recalled that it was not too long ago when individual artists were the only ones concerned with what happened to the art from a reproduction standpoint and there were no established responsible art studios.

Those were the days, he said, when to the engraver and printer all artists were irresponsible, unbalanced, impractical characters, and, to the artist, all engravers and printers were stupid mechanics whose only mission in life was to ruin perfectly good art. Conrad called for a greater cooperative effort on the part of the artist, engraver and printer in achieving more progress in reproductions in the Graphic Arts industry.

A few figures pertaining to the Vogue-Wright Studios were related by Conrad. The firm occupies approx. 100 thousand sq. ft. of space. The mail order division produces about 3000 complete pages a year, consisting of over 25,000 individual illustrations. A staff of 300 people is made up of artists, photographers, stylists, interior decorators, carpenters, production men, painters, seamstresses and merchandise handlers.

It takes the combined talents and craftsmanship of all these people, he said, to consistently turn out the high standards of art demanded today. Conrad termed this coordinated specialization instead of a production line for volume production.

The Clinic then adjourned to the various display panels in the meeting room which accompanied Conrad and members of his organization. The panels included a man's fashion figure, drawn in various stages, with a specialized artist handling each stage.

Another interesting display was labeled *Layout, Lettering and Illustration.* This contained the complete evolution of an ad from the original thumbnail sketch to the printed piece.

The black and white photography display illustrated the different photo effects

No More Trouble With Trim

Continuous Baling is the answer to your problem. An AMBACO baler can be easily fitted into your production line, and will quickly compress paper trimmings into neat, easily handled bales. Waste paper can be removed as fast as it accumulates, and your plant can be maintained in a neat orderly manner. Fire hazards are reduced and valuable floor space conserved.

AMBACO Balers will handle all compressible scrap, such as cloth or cardboard, as fast as you can feed it by hand, by gravity, by conveyor, or suction feed. Baled waste paper is salable. You can remove the expense from your waste, save labor, and increase efficiency. Write today for full information.

ABC The AMERICAN BALER CO. 76 OHIO STREET BELLEVUE, OHIO

CONTINUOUS BALING ★ CONTINUOUS BALING ★

"Be Thrifty in '50"

BAUMFOLDERS

14x20 Five-fold Automatic Baumfolder

17x22 Five Fold Baumfolder.

17½x22½ Six-fold Automatic Baumfolder

22x28 and 25x38 Automatic Baumfolders.

30x46 . . . 60 Automatic Baumfolder.

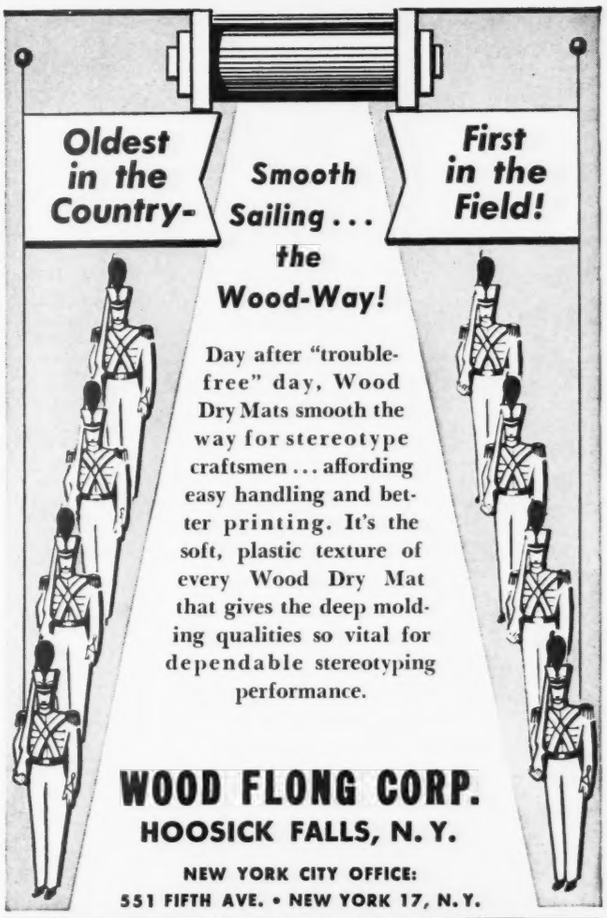
Proportionately painless in outgo, but boy, OH BOY . . . an **income** for a **life time** of **golden profit.**

If kept busy but two or three days a month it will pay for itself several times over, before you pay for it.

The next move is yours . . . write, wire or phone collect (from anywhere) . . . Lombard 3-8164-5-6.

RUSSELL ERNEST BAUM, INC.

615 CHESTNUT ST. PHILADELPHIA 6, PA.



Day after "trouble-free" day, Wood Dry Mats smooth the way for stereotype craftsmen . . . affording easy handling and better printing. It's the soft, plastic texture of every Wood Dry Mat that gives the deep molding qualities so vital for dependable stereotyping performance.

WOOD FLONG CORP.

HOOSICK FALLS, N. Y.

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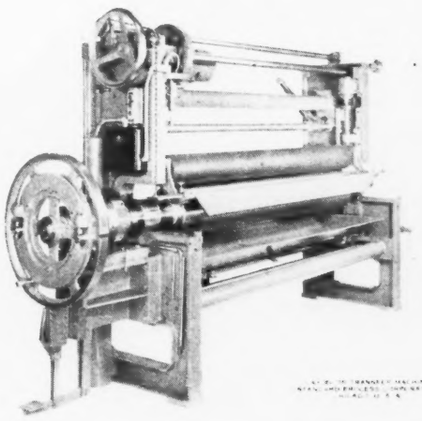

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Manufactured in a wide range of sizes for transferring carbon tissue in perfect register to any number of cylinders. This is accomplished by means of a definite key between copy and cylinder, a positive method of fixing the cylinder in the machine and a device for checking accuracy of its position so it can be re-positioned any number of times. A lock on the dividing head secures the cylinder in position. The rubber impression roll is raised and lowered by a gear motor with pressure against the cylinder regulated by an adjustable control. Equipped with counter-balanced register bar, Vernier scale and scribe.

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Manufacturing Gravure Equipment & Supplies

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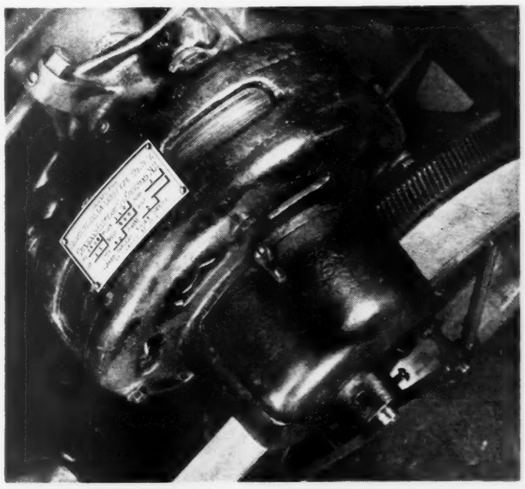

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it is possible to obtain by the use of different photo printing surfaces. A shoe and leather goods display showed the effects of such photography when rendered on ross board, along with an illustration of leather goods in various stages of production.

Letterpress's Future

(Continued from Page 50)

and Engineering Council for investigation. Many of these were enumerated by the speaker which he read from an impressive list of industry research activities.

Improved Machinery

If equipment manufacturers are inspired and shown the need for improved machinery, it should be possible to obtain equipment which will result in better quality and reduced costs. A pressroom superintendent once said of a certain make of press, "That press belongs at the bottom of the East River." This mechanical executive has neither the vision nor the stamina to produce results with the new equipment which happened to be of a new design. Subsequently, that equipment was made to work properly and proved to be a real money maker for the company which had the courage to see the problem through its first two years of experimentation.

Better Material

Better materials can be had if the problem is properly analyzed and put squarely to the supplier. A good example of this is the use of rubber form rollers in letterpress presswork which took several years to perfect but are now in successful operation in the Conde Nast plant. Another is the reduction in the number of web breaks on magazine web presses as a result of cooperation between the paper mill and the Conde Nast plant.

The relationship between ink mileage and the properties of the ink and paper are under study. A continuing effort is being made to apply physical-chemical principles to the development of new and better types of rapid-drying inks. Other projects concern paper, which are: development of a method for evaluating the printing smoothness of paper; studies relating to the printing qualities of paper; investigation of paper in relation to improved quality and increased security.

4 Clinics

(Continued from Page 63)

"unsewn binder," as ideal for perfect binding. To gluing machines have been added friction feeds, making their use in gluing operations more efficient. The Johne three-knife trimmer seems excellent for smaller shops. His impression was that equipment was chiefly designed for easier operation, and was much more sturdily built than in the past.

Mr. Brock covered edition binding. He reported the DeFlorez casemaker as completely new in principle, though admittedly high in cost. Average production is 3000 per hour. The Brehmer sewer bids fair to compete with similar American machines, as does the unsewn binder, which seems ideally suited to low cost book production, such as juveniles, etc. The automatic feed Stampomatic hydraulic power stamper design is a great departure from older methods.

"What I Didn't See"

"What I Didn't See". Displays dealing with materials handling. This is a serious problem in the bindery. Industry is now heavy in character and materials runs into tonnage. Would-be exhibitors applied too late, and thus industry is denied opportunity of seeing what can be done with lift trucks, stackers, conveyors, and similar handling equipment.

Mr. Whitton described advances in paper cutting from flat cutters on chain drive principle, fully hand operated, up to today's hydraulically operated clamps and knives. Sheridan trimmers and Seybold 3-knife cutters and trimmers afford production (with five men) up to 60,000 books per day. The shear principle has been but little varied, except to lengthen the shear action to eliminate draw. The hydraulic principle is the biggest single improvement in cutting, and a close second is the electronic spacing principle such as was seen on the Lawson cutter.

In reply to the question: *Is there any automatic or semi-automatic banding equipment?* the reply was that there are available small semi-automatic banding presses or you may use tying or wrapping machines such as Pak-tyer or Morpac. Other wrapping machines are also available, but few are suited to wrapping case-bound books. All are expensive.

In reply to a query for information about collating machinery at the Exposition, Mr. Sendor said the Macey machine seems to be the simplest with its pile feed, 8 pockets, turning out about

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Hoe Press for Expanding New York *Mirror* —Executives of the New York *Mirror* and R. Hoe & Co., Inc., are shown during an inspection of one of three new six-unit Hoe presses being installed in the *Mirror*'s expanded Brooklyn, N. Y., plant. Each of these presses is designed to turn out a 96 page tabloid or two 48 page tabloid newspapers. From left to right in the picture are: Charles B. McCabe, *Mirror* Publisher; Charles Murphy, Pressroom Supt.; George Lindenberg, Foreman of Mechanists; F. W. Schnell, Hoe Sales Representative; Warren Kelly, *Mirror* General Manager; J. F. Cullen, *Mirror* Business Manager; William Detlef, *Mirror* Chief Accountant; Harry Sloan, *Mirror* Assistant Production Manager; and Arthur Dressel, Hoe Executive Vice President.

John J. Shea, General Production Director of the Hearst Corporation and engineer for all the plants of the company, has been in charge of the Brooklyn expansion program. Stereotype equipment being installed includes two 10 T. Kemp Gas-Fired Furnaces with two automatic vacuum back casting boxes and two heavy-duty shavers. Newly installed Cutler-Hammer conveyors will deliver the printed papers to the mail room where new tying machines and a conveyor system for taking the tied bundles to the loading platform are being installed.

4000 assemblies per hour. Seybold utilizes toboggan principle and has gluing attachment. The JCM Betsy collator is operated by rotary principle which seems a trifle complicated—yet it works.

Many questioned whether any of the machines would actually feed carbon, despite manufacturers' claims. The Seybold representative said his collator would handle most types of carbon paper, but some are impossible.

Considerable interest was shown in the Johne 3-knife trimmer in the Dexter exhibit. A similar model on plant trial at Brock & Rankin, handles stacks up to 5 in. high. Operator got 12 a minute—15 is the claim. It was felt the trim although the clamp and feed mechsnism could be improved. Weighs 1 T.

Static can be cut down but not eliminated by some of the many devices on the market, such as Ionotron, Herbert, etc., but old gadgets of tinsel, etc., still work. One plant used infra-red tube in a reflector, but had small fires, until the gadget was moved. Air conditioning eliminates most paper static problems, but one air conditioned offset firm finds nearly two weeks needed to bring cloth into stabilization.

ITCA Convention

(Continued from Page 56)

tirely satisfactory for transparencies; and that satisfactory results could not be secured without dusting when a sheet called Lumarith was used for transparencies. However, one plant reports entirely satisfactory results from Lumarith without dusting.

During his address, Mr. Highton referred several times to the cooperation which had been extended the committee by Executive Secretary Frank M. Sherman. Specifically, the committee approves Bulletin No. 6 which contains a list of satisfactory materials for use in production reproduction proofs.

Mr. Highton discussed a recent visit to the GPO in Washington, D. C., where the GPO method of proofing acetate sheets has been developed under the supervision of Morris H. Reaves, Supt. of Composition. Also, in connection with the method, Research Director Morris S. Kantrowitz has developed a special ink formula for taking acetate proofs. The formula will be made public shortly.

In taking acetate proofs at the GPO, rubber rollers are used. Three impres-

Mechanical and production executives are invited to submit to the editor mechanical or production helps which have been devised in their plants. Our readers will be glad for the information.

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"Electromatic"
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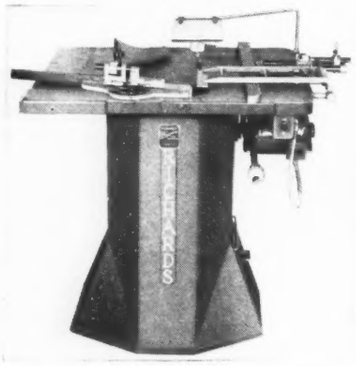

For Stereotypers—Electrotypers —Photo Engravers.
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Instant change to SAW-TRIM
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sions are made on the rubber blanket, then two on the acetate. Ethyl cellulose of 0.003 in. thickness is used. Designation is Ethocel Sheeting No. 610, ga. No. 3. It is made by Dow Chemical Co., Midland, Mich.

The special ink gives excellent results on the one make of acetate sheet. Ink dries almost immediately and is perfectly opaque. No dusting is necessary. The ink image on the acetate sheet withstands considerable careless handling.

Varsol is used ordinarily for washing type in the GPO composing room. But when the type is locked on the proof press and is ready for acetate proofing, it is washed with a 50-50 solution of trochloroethylene and ethylacetate. Ordinary fluids used for washing type have an antipathy to the special ink used and are referred to as "poison" as related to the newly-developed ink. Immediately prior to proofing, the rubber press blanket is washed with Varsol. Varsol cleans the blanket and gives it an added affinity for the ethylcellulose sheet, holding it tightly to the cylinder and insuring perfect register.

Mechanical Standards Committee

Sol M. Cantor, Chairman of the Mechanical Standards Committee, made a verbal report. The Committee feels that some of the objectives with respect to improved typesetting equipment will be forthcoming if Association members keep on plugging hard enough.

Competing With You for Business

In view of the present-day economic situation, Ernest F. Trotter, Editor of *Printing Magazine*, stated "Many of you (ITCA members) will have to find ways and means to make the lead in your plants move a bit faster, find ways to make it more profitable than it has been —and all of you will have to pay considerably more attention to the competition for typesetting volume than you have ever done before."

As a means for improving production, he said that too few have given as much attention as they should to the comfort of the worker. The purpose of work simplification is to make it easier for workers to work. The results in some cases have been phenomenal.

With respect to production improvement he related the story of one catalog job where the customer marked in a lot of figure changes on tear sheets of the previous job and sent them in as copy. Production time was cut almost 60% by persuading the customer to type all his corrections as new copy and to mark Kill on all lines of the original job that had to be either deleted or changed. One compositor killed out the lines from the galleys while the new lines were being set. Insertion of the new copy in its proper place was simple. The proofreader had an easy task instead of a headache.

"Most of us," said he, "are so anxious to get copy on the machines that we do not stop to think how we can make it easier for the worker and simultaneously save time on the job. That's inertia."

He spoke of a plant in the New York area where music is piped into the composing room, the front office and the bindery. He said that it helps to keep the workers from feeling tired—which means more production. In this same plant a doctor gives a free shot in the arm to any employee who wants a vitamin shot. One

Write . . . for a copy of the new
Vandercook Illustrated Price List

Shows Vandercook Proof Presses, Test Presses, Block Leveller, Plate, Type and Slug gauges —with descriptions, specifications and prices.

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Cutler-Hammer two motor full automatic newspaper press drives and control panels. 220 Volt, 3 phase, 60 cycle AC. Complete with resistors and push button stations.

One 75/ 7½ H.P. cross head type, will power 3 or 4 unit press.

One 40/ 3 H.P. faceplate type, will power 4 decks single width, quad or 16 page tubular press.

Also, one 25 H. P. 220 volt, 60 cycle, 3 phase, AC, G. E. single motor friction press drive with drum speed controller suitable for 3 deck single width press or equivalent.

Used, serviceable, recently withdrawn from service, reasonably priced, immediately available.

The Eastern Color Printing Company
Waterbury 20, Conn.

FOR SALE

Rotogravure Printing Cylinders. Circumference of bodies 45½". Length 66½". Length over shaft 116". Copper bases. 20 available. Specifications and prices furnished. Reply Box 354.

MACHINERY WANTED

Approximately 56" or 60" Miehle, Automatic Feed, Pile delivery, AC equipment. Must be in good condition. For cash. AMERICAN DECAL CO., 4334 W. Fifth Ave., Chicago, Illinois.

FOR SALE

One Double Unit Sta-Hi Form File, capacity for storing 32 newspaper page forms. Factory rebuilt and guaranteed. Also one Sta-Hi Vacuum Flat Casting Box, reconditioned, in good operating condition; capacity 1 to 8 columns, maximum 20" x 24".

Sta-Hi Corporation
Box 152, Whittier, Calif.

HELP WANTED

First rate opportunity for all around thoroughly experienced man to supervise production of roto-gravure cylinders for converting and packaging field. East Coast plant. Replies held confidential. Write to A. R. Bradie, Mosstype Roller Company, Inc., 33 Flatbush Avenue, Brooklyn 17, N. Y.

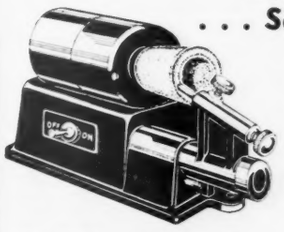
HELP WANTED

Partner for printing machinery business, prefer expert press or Linotype mechanic. Replies confidential. Box 455, Printing Equipment *Engineer*.

SITUATION WANTED

INDUSTRIAL ENGINEER presently employed as Plant Engineer in letterpress, web and flatbed plant of 900 employees desires relocating to small town or city. Nine years experience. Excellent references. Write Box 456.

The NOLAN Router Bit Sharpener Cuts Routing Costs . . . Saves You Money



Now you can resharpen any routing cutter to the exactly correct angle quickly and easily. You can always have sharp bits at low costs. The Nolan Router Bit Sharpener will quickly pay for itself out of money saved on new cutters.

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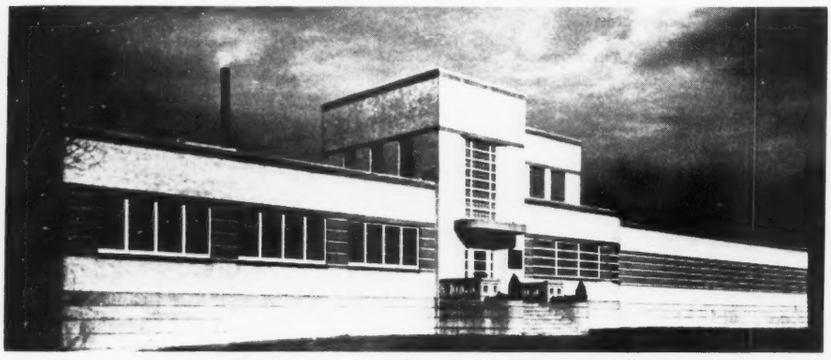
On Friday night, September 15, The Sperry 1000 Reception was attended by a number of executives attending printing industry conventions in Chicago. The reception was held at Hotel Sheraton. In this illustration are shown (left to right): Robert R. Porter, General Sales Mgr., Ford Instrument Co.; William Osborne, Eastern Mgr., *Printing Equipment Engineer;* James Smith, Ford Instrument Co., and Robert Billeb, Manager, Millprint, Inc., Milwaukee.



Purchases Plant—The 60 year old Hammer Dry Plate & Film Co., St. Louis, Mo., has been purchased by interests headed by Benjamin Sugarman, President of Consolidated Photo Engravers & Lithographers Equipment Co. The company, to be operated as an affiliate of the Consolidated parent company in Chicago, will be known as the Consolidated-Hammer Dry Plate & Film Co. with Sugarman, President, and R. W. Salzgeber, Vice President. The modern Consolidated-Hammer plant (pictured above) is completely air conditioned, dust and humidity controlled. The firm has introduced the Koloroid Color Proofing Process which makes possible the making of color proofs from color separation negatives and the Plasticoid Carbon Tissue Process for gravure and silk screen work.

man with a bad heart says he owes his life to the doctor. The doctor knows all the men personally, gives them advice and medicine for colds, and checks up on their fears about this or that pain.

"If you think that employer doesn't get it all back in loyalty and improved production." the speaker asserted, "you are crazy. I should mention that the plant is modern and is streamlined."

With respect to typewriter-like composition, Trotter said that typographic compositors "are leaving a field open for someone with the price of a typewriter to enter . . . you can't laugh off low-cost work . . . The one respect in which this kind of work does not fit readily in with your present scheme is that it is low cost work. I have yet to find one plant that can do both high quality work and dirt-cheap work under one roof. It takes two different kinds of people."

Benjamin Sugarman, President of Consolidated PhotoEngravers & Lithographers Equipment Co., active in the recent purchase of Hammer Dry Plate & Film Co.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, tell us.

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OCTOBER 1950

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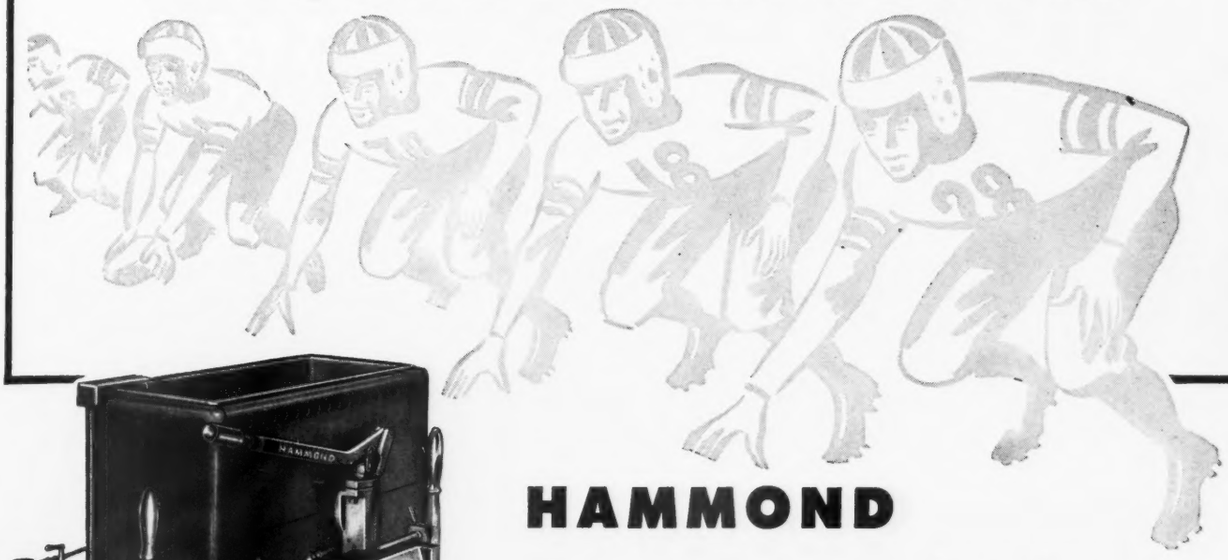
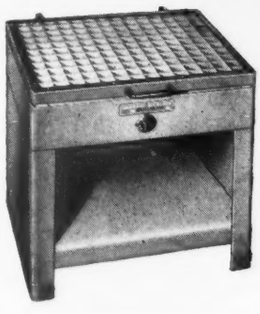
FAST, TOUGH and RUGGED



HAMMOND

EasyKaster "8"



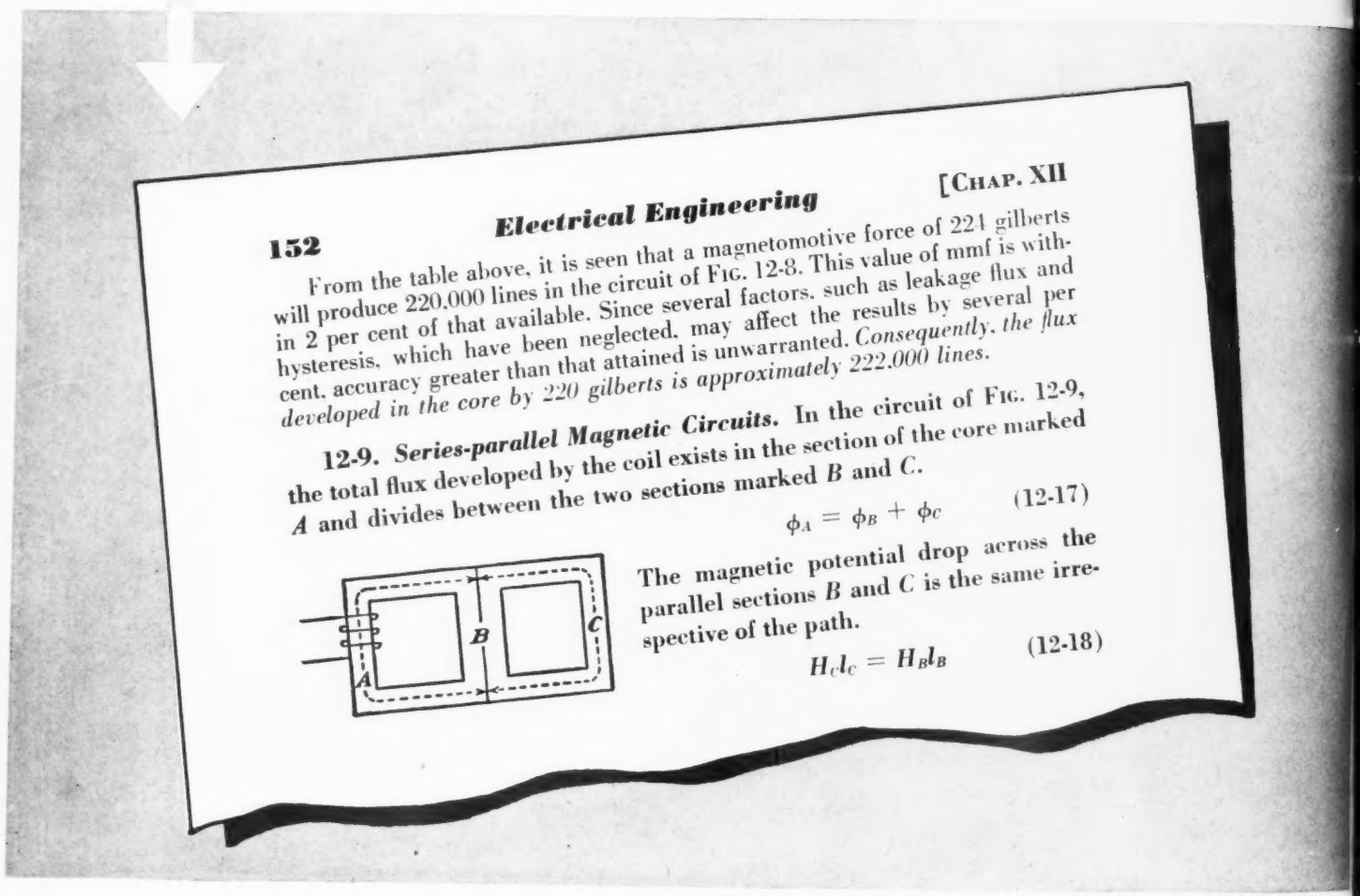
GET MATS DRY AND FLAT FAST with the Hammond Full-Page Scorcher. It provides uniform and fast drying with its aluminum bed plate and its new open type of grilled cover.

FAST, TOUGH AND RUGGED! That's the Hammond EasyKaster 8! Fast heating-up time —the 800 lb. valve controlled melting pot heats to pouring temperature in 45 minutes with gas. Automatic metal temperature control keeps metal at the desired casting temperature. Automatic and balanced lock-up provides the fastest and most accurate casting ever enjoyed on a flat caster. The rugged heavy construction is indicated by the weight — 1210 lbs. net. Write for complete information.

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

It takes a separator to get the cream out of mixed composition



152 **Electrical Engineering** [CHAP. XII

From the table above, it is seen that a magnetomotive force of 221 gilberts will produce 220,000 lines in the circuit of FIG. 12-8. This value of mmf is within 2 per cent of that available. Since several factors, such as leakage flux and hysteresis, which have been neglected, may affect the results by several per cent, accuracy greater than that attained is unwarranted. *Consequently, the flux developed in the core by 220 gilberts is approximately 222,000 lines.*

12-9. *Series-parallel Magnetic Circuits.* In the circuit of FIG. 12-9, the total flux developed by the coil exists in the section of the core marked *A* and divides between the two sections marked *B* and *C*.

$$\phi_A = \phi_B + \phi_C \qquad (12\text{-}17)$$

The magnetic potential drop across the parallel sections *B* and *C* is the same irrespective of the path.

$$H_C l_C = H_B l_B \qquad (12\text{-}18)$$

ABOVE is an example of complex composition where eight different faces were used. Yet each matrix was returned to its proper magazine automatically on the Intertype® Mixer . . . No slugs to cut . . . No mixed matrices to hand-sort.

Intertype Mixer

MIXED COMPOSITION is profit-making "cream" business . . . if matrices are distributed *automatically* after they are set. An Intertype Mixer Line Composing Machine does just that. It *separates* as well as *mixes* type.

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